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LOW-LEVEL RADIOACTIVE WASTE POLICY ACT AMENDMENTS OF 1985

NOVEMBER 22 (legislative day, NOVEMBER 18), 1985.—Ordered to be printed

Mr. MCCLURE, from the Committee on Energy and Natural Resources, submitted the following

REPORT

together with

MINORITY VIEWS

[To accompany S. 1517]

The Committee on Energy and Natural Resources, to which was referred the bill (S. 1517) to amend the Low-Level Radioactive Waste Policy Act of 1980 to authorize continued financial and technical assistance of the Department of Energy to the regional low-level waste compact regions, and to revise the guidelines and procedures for the establishment and use of regional disposal facilities for low-level radioactive waste, and for other purposes, having considered the same, reports favorably thereon with an amendment (in the nature of a substitute) and recommends that the bill, as amended, do pass.

I. PURPOSE OF THE MEASURE

The purpose of the bill, as reported by the Committee on Energy and Natural Resources, is to amend the Low-Level Radioactive Waste Policy Act to ensure access to existing, non-Federal, low-level radioactive waste disposal facilities. At the same time, the bill establishes certain volume limitations on the waste that must be accepted at those facilities, and requires as a condition for access that certain actions be taken by compact regions and States for the development of new low-level radioactive waste disposal facilities. Certain monitoring and administrative functions, and technical and financial assistance responsibilities, are assigned to the Depart-

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ment of Energy during the period of access. In addition, the Nuclear Regulatory Commission is directed to promulgate regulations with respect to certain types of materials containing low-level radioactive waste.

II. Summary of Major Provisions of Committee Amendment

Section 2 contains definitions of key terms used in the Act.

Section 3 delineates the specific responsibilities of the States and the Federal Government for disposal of low-level radioactive waste. State responsibilities include all low-level radioactive waste generated within the State that consists of Class A, B, and C waste (as defined by NRC as of December 27, 1982), transuranic waste and certain other waste that is Class C or below in radiation content, and Federally-generated waste not produced or owned by the Department of Energy nor produced from atomic weapons activities or from the decommissioning of Navy vessels. The Federal Government is assigned the responsibility for disposal of all remaining low-level radioactive wastes not specifically assigned to the States.

Section 4 authorizes States to enter into regional compacts for the purpose of disposing of the low-level radioactive wastes generated within the region. Other provisions of section 4 preserve existing Federal and State authorities with respect to low-level radioactive waste disposal.

Section 5 identifies the restrictions applicable to the disposal of low-level radioactive waste during the interim access period from January 1, 1986, through December 31, 1982, and thereafter.

Subsections 5(a) and 5(b) limit the availability of volume disposal capacity at the existing commercial disposal facilities in South Carolina, Washington, and Nevada during the interim-access period. Volume limitations are lisited in terms of overall seven-year limits, and in terms of annual limitations (for purposes of balancing fill rates among the three facilities).

Subsection 5(c) authorities the imposition of surcharge fees by the States of South Carolina, Washington, and Nevada on waste received for disposal from States outside of the region in which the applicable disposal facility is located. This subsection also sets maximum surcharge fee levels and describes the methods to be used for collecting and transferring such fees to the appropriate parties.

Subsection 5(d) assigns specific volume allocations to commercial nuclear power plants for low-level radioactive waste disposal during the interim-access period. Allocations are transferable. An "unusual volume" set-aside is provided to enable certain power plants to qualify for additional allocations that might be needed during periods of unusual or unexpected plant activities. And overall limitation of 11,900,000 cubic feet of disposal capacity is provided for use by all commercial nuclear power plants during the seven-year interim-access period.

Subsection (e) establishes specific action requirements and milestone dates for new disposal site development by nonsited States or regions. Any nonsited State or region must meet these requirements in order to retain access to the existing disposal facilities. Penalties for missing milestones are determined by the sited States and may range from immediate denial of access to continued access at additional, "penalty" surcharge fees. All waste generators sub-

ject to penalty surcharges may seek reimbursement from their State for the additional disposal expenses incurred. The incentive for meeting milestones consists of a 25 percent rebate of all surcharge fees collected, to be equally distributed to all qualifying host States.

Subsection (f) establishes criteria for determining when a compact region may deny access to its disposal facility for any low-level radioactive waste generated outside the region.

Subsection (g) grants administrative authorities to the States of South Carolina, Washington, and Nevada for the purpose of acquiring information necessary to monitor compliance with the Act.

Subsection (h) describes the procedure by which a State may obtain emergency access to a disposal facility, subject to certain terms and conditions.

Section 6 assigns to the Department of Energy certain responsibilities for technical assistance, data gathering, monitoring, reporting, and other functions needed for the development of new low-level radioactive disposal facilities.

Section 7 assigns to the Nuclear Regulatory Commission the responsibility for regulating the disposal of mixed wastes at low-level radioactive waste disposal facilities.

III. Background and Need

The Low-Level Radioactive Waste Policy Act, enacted in 1980, was designed to encourage States to form regional compacts that would cooperatively plan and operate new low-level radioactive waste disposal sites, thereby more equitably allocating the burden now borne by just three States that host active disosal sites (Beatty site in Nevada, Hanford site in Washington, and Barnwell site in South Carolina). The Act included an exclusionary provision that enabled compacts consented to be Congress to exclude wastes from outside their region effective January 1, 1986.

Since passage of the 1980 Act, seven compacts have been established and presented to Congress for ratification. These compacts, representing 37 States, include the three "sited region" compacts and four "unsited region" compacts. Other States are in various stages of progress, as summarized in Table 1.

Because a number of States have so far failed to enter into compacts, and furthermore, no States have developed new disposal facilities to date, the future of low-level waste disposal is in jeopardy under the current law. Ratification of the compacts currently before Congress would allow the three existing disposal sites to close their doors to out-of-region wastes. As a result, the Congress has refrained from granting consent to those compacts.

The Governors of the three sited States have announced that they will close down their disposal facilities by January 1, 1986, if Congress does not take some action to resolve the impasse. This could lead to a waste-disposal crisis similar to the one this country experienced in the fall of 1979, when two of the three facilities closed down, precipitating passage of the 1980 Act. With approximately 2,600,000 cubic feet of low-level radioactive waste being shipped annually from nuclear power reactors, hospitals, pharmaceutical industries, and research institutions, even a temporary shutdown of the waste disposal operations would have extremely

serious consequences, including the closing of numerous facilities that are vital to the maintaining of essential public service.

Legislation is clearly needed for the purpose of preventing a nationwide crisis in low-level radioactive waste disposal. The failure to achieve the intended result of the 1980 Act can be largely attributed to the Act's lack of clearly defined incentives and penalties that would induce the establishment of new disposal capacity within the non-sited compact regions. Thus, the selection of appropriate incentives and penalties with respect to new disposal-site development is an essential element of any solution to the serious problem now facing the States in the unsited regions.

Earlier this year, the Governors of South Carolina, Washington, and Nevada propsed a compromise that would resolve the present dilemma. they agreed to allow continued, limited access to the regional disposal facilities located in their three States for a period of 7 years, in return for the enactment of Federal legislation that would establish strong incentives for the development of new regional waste-disposal facilities.

In exchange for providing continued access to their disposal facilities, the Governors of the three sited States have requested a guarantee of:

(1) strict limitations in the volumes of low-level radioactive waste that the three diposal sites must accept during this period,

(2) specific and enforceable milestones that would ensure the development of new disposal facilities in other regions of the country, and

(3) compensation to the three currently sited States in the form of surcharges on the volume of waste accepted for disposal at the three existing sites during the interim-access period.

Mixed-wastes designated for disposal at low-level radioactive waste disposal facilities are currently subject to conflicting regulatory requirements. Mixed wastes are those waste materials that contain low-level radiation as well as hazardous substances. Less than 1 percent of the waste disposed of at low-level radioactive waste disposal facilities falls in the category of mixed wastes. Nevertheless, disposal of these mixed wastes is in jeopardy because of the conflicting regulatory requirements of the Nuclear Regulatory Commission (under 10 CFR Part 61) and the Environmental Protection Agency (under the Solid Waste Disposal Act). A facility operator dealing with such wastes may find that if he complies with one set of regulations, he may risk violation of the other set, unless these inconsistencies are resolved. Furthermore, the current system of dual permitting and enforcement authorities resulting from these two sets of regulations makes the disposal of mixed waste a needlessly complex and difficult process.

Concurrent passage of legislation amending the Low-Level Radioactive Waste Policy Act and ratification of the existing compacts will provide authority to the affected States to control out-of-region access to their sites and will, at the same time, compel all States to establish, in a predictable and controllable manner, a system for disposing of low-level radioactive waste.

TABLE I.—REGIONAL LOW-LEVEL WASTE COMPACTS

[Percentage in parenthesis represents percentage of waste generated within that region]

Sited Regions:

Southwest (37%)
South Carolina (Barnwell Site), Virginia, Mississippi, Tennessee, Florida, North Carolina, Georgia, Alabama
Northwest (4%)
Washington (Hanford Site), Idaho, Oregon, Montana, Utah, Hawaii, Alaska
Rocky Mountain (1%)
Nevada (Beatty Site), Colorado, New Mexico, Wyoming

Nonsite Regions:

Central (2%)
Kansas, Louisiana, Arkansas, Oklahoma, Nebraska
Central Midwest (8%)
Illinois, Kentucky
Midwest (7%)
Michigan, Iowa, Indiana, Minnesota, Missouri, Ohio, Wisconsin
Northeast (9%)
Maryland, New Jersey, Connecticut, Delaware

Status of Remaining States

Appalachia (Proposed) (10%)
Pennsylvania & states contiguous to PA (WVa.)
Dakota (Proposed, pending Nov. Referendum in S. Dak.) (1%)
South Dakota, North Dakota
Western (5%)
California, Arizona
Texas (unaffiliated)—"Go-it-alone" state (2%)
Others (15%)
Maine, New Hampshire, Vermont, and Massachusetts are holding "discussions". Maine and Massachusetts, however, are also proceeding with "go-it-alone" efforts to develop in-state disposal facilities.
New York may develop it's own facility, go-it-alone, using West Valley for temporary storage
District of Columbia may join NE compact

IV. Legislative History

S. 1517 was introduced on July 29, 1985, by Senator McClure. The bill was referred to the Committee on Energy and Natural Resources.

On August 1, 1985, Amendment No. 583, an amendment to S. 1517 in the nature of a substitute, was introduced by Senator Thurmond. It was also referred to the Committee. The text of that amendment is identical to S. 1578, which was introduced by Senator Thurmond on the same date and referred to the Committee on Environment and Public Works.

On October 8, 1985, the Committee on Energy and Natural Resources held a joint hearing with the Committee on Environment and Public Works on S. 1517 and S. 1578.

V. Committee Recommendation and Tabulation of Votes

The Committee met in open business session on November 6, 12, and 13, 1985. The committee, with a quorum present, on November 13, 1985, recommended that the Senate pass S. 1517 if amended as described herein.

The rollcall vote on reporting the measure was 16 yeas and 2 nays, as follows:

Yeas	Nays
Mr. McClure	Mr. Metzenbaum[1]
Mr. Hatfield[1]	Mr. Bradley
Mr. Weicker[1]	
Mr. Domenici	
Mr. Wallop	
Mr. Warner	
Mr. Murkowski	
Mr. Nickles[1]	
Mr. Hecht	
Mr. Evans	
Mr. Johnston	
Mr. Bumpers[1]	
Mr. Ford	
Mr. Melcher[1]	
Mr. Bingaman	
Mr. Rockefeller[1]	

[1]Indicates voted by proxy.

VI. Committee Amendment

The Committee adopted an amendment in the nature of a substitute to S. 1517. The amendment is described in the Summary of Major Provisions and the Section-by-Section Analysis.

VII. Section-by-Section Analysis

SECTION 1—SHORT TITLE

Section 1 provides that the short title is the "Low-Level Radioactive Waste Policy Act Amendments of 1985".

SECTION 2—DEFINITIONS

Section 2 contains definitions of terms used in the Act. The terms of particular interest are discussed below.

The definition of low-level radioactive waste is intended to encompass a broad range of radioactive waste materials, excluding high-level wastes, spent fuel, and uranium mill tailings, but including:

(1) Class A, B, and C low-level wastes,

(2) transuranic wastes and other wastes that, whether above or below Class C waste, are below high-level waste in terms of radiation content, and

(3) radioactive wastes referred to as Naturally-occurring and Accelerator-produced Radioactive Material (NARM) wastes generated from commercial processes of accelerator research activities after the date of enactment of S. 1517. The definition of low-level radioactive waste thus includes all NARM waste produced in manufacturing, research, and other activities after enactment of the Act, but excludes NARM waste produced during manufacturing activities associated with radium production and utilization industries, the phosphate industry, or other activities that took place prior to the bill's enactment.

The terms "sited State" and "sited compact region" are meant to refer to States or compact regions in which operating low-level radioactive disposal facilities now exist, i.e., the facilities in Barnwell, South Carolina; Hanford, Washington; and Beatty, Nevada. The terms are not intended to refer to the three previously-operated facilities at Sheffield, Illinois; Maxey Flats, Kentucky; and West Valley, New York.

The term "State" includes the 48 contiguous States, Hawaii, Alaska, the District of Columbia, and the Commwealth of Puerto Rico. The definition purposely excludes other territories or possessions of the United States, because they generate negligible quantities of low-level waste that are manageable under existing arrangements, and thus do not warrant imposing additional, prescriptive responsibilities on these territories.

The term "generate" is considered self-explanatory, and is therefore not defined in section 2. For purposes of clarification, however, the term should be construed to refer to the actual creation of low-level radioactive waste as a *byproduct* of a process or activity that uses radioactive or special nuclear materials. Thus, the operation of a nuclear powerplant or a radiopharmaceutical manufacturing facility will generate low-level radioactive waste. However, in the case of intermediate handling, processing, or compacting of low-level radioactive wastes, the wastes so processed or handled would be considered the primary product—not a byproduct—of the activity, and therefore, these activities would generate low-level radioactive wastes only to the extent that certain equipment uses in the activity became contaminated as a result of contact with the low-level radioactive waste being processed.

SECTION 3—RESPONSIBILITIES FOR DISPOSAL OF LOW-LEVEL RADIOACTIVE WASTE

Section 3 assigns to the States and the Federal Government specific responsibilities for the disposal of low-level radioactive waste. The States are given responsibility for all types of low-level radioactive waste that are currently considered acceptable for disposal at the three existing commercial facilities. Such wastes include all Class A, B, and C radioactive wastes as defined by the Nuclear Regulatory Commission regulations in effect on December 27, 1982 (see the appendix). The reference to the specific date prevents any subsequent modifications in the definitions of Class A, B, or C wastes from changing the States' responsibilities under this Act.

Also listed under State responsibilities are all transuranic waste and NARM wastes whose radiation levels are no greater than Class C. The Nuclear Regulatory Commission's disposal practices for disposal of these wastes is similar to the requirements for Class A, B, and C wastes.

Disposal of certain low-level wastes generated by the Federal Government is also designated as a State responsibility, reflecting current practices. The Federal wastes in this category include low-level radioactive wastes produced by Veterans Administration hospitals, Government-operated medical research clinics, and other activities of the Department of Agriculture, the Department of Defense, the Department of Health and Human Services, the Environmental Protection Agency, the National Aeronautics and Space Ad-

ministration, and the National Bureau of Standards. These wastes represent about 2 percent of the total volume of low-level waste presently being disposed of in commercial facilities.

Not included under State responsibilities are low-level wastes generated or owned by the Department of Energy, certain wastes generated during the decommissioning of Navy vessels, wastes from atomic weapons defense activities, and wastes subject to remedial action or disposal under the Formerly Utilized Sites Remedial Action Program. The Federal Government has responsibility for these wastes.

Also assigned to the Federal Government under section 3(b) of this Act are all other wastes not explicitly listed as a State responsibility, including any wastes whose disposal has never previously been addressed in Federal law. The principal categories of wastes that would thus be assigned to the Federal Government for the first time under this Act are commercially-produced transuranic waste and NARM waste that are above Class C in radiation level.

In subsection (b)(2), the Secretary of Energy is required to prepare a report on the Departmental plans for disposal of certain types of wastes for which responsibility for disposal is assigned to the Federal Government under paragraph (1)(D). The report would include the Secretary's recommendations for disposal of these wastes, which might include such options as disposal at existing Federal or commercial sites, or disposal at new facilities specifically dedicated to this purpose. The Secretary is required to identify any new statutory authority that would be needed in order to proceed with any of these recommendations. Furthermore, under subsection (b)(3), the Secretary would be prohibited from initiating any new activities at Federal low-level radioactive waste disposal facilities resulting from newly-defined responsibilities under this Act until ninety days after the Secretary's report is submitted to Congress for review.

Subsection (b)(4) requires the Nuclear Regulatory Commission to initiate a rulemaking that would exempt certain low-level radioactive materials from the low-level radioactive waste disposal requirements under section 61 of title 10 of the Code of Federal Regulations (see the Appendix). Such a rule would, in effect, be similar to the "de minimus" standards that the Commission has already established for disposal of certain materials containing very low concentrations of radioactive hydrogen and carbon-14. In preparing for the rule required under this Act, the Commission would identify certain low-level waste streams that are likely candidates for release from regulatory control from a radiation hazard standpoint. Those waste streams removed from control under this rulemaking would be exempt from the low-level radioactive waste disposal requirements. The point of the rulemaking is to remove the unnecessary disposal burden of waste streams that are below regulatory concern.

SECTION 4—REGIONAL AND STATE DISPOSAL OF LOW-LEVEL RADIOACTIVE WASTE

Section 4(a) restates the policy of the Federal Government that was established in the original Low-Level Radioactive Waste Policy Act of 1980, that the State responsibilities for disposal of low-level

radioactive waste are best managed, in terms of both safety and efficiency, on a regional basis. The exclusionary rights provided in the bill to regional compacts ratified by Congress furnish a strong incentive for managing the waste on a regional basis.

Section 4(b) specifically exempts the disposal of all low-level waste that is a Federal responsibility from the requirements of any compact. However, those Federally-generated wastes that are listed as a State disposal responsibility under section 3(a) must conform to the same disposal requirements as any other low-level radioactive waste that is disposed of in a non-Federal (i.e., commercial) disposal facility.

Paragraph (3) emphasizes the continued Federal preemption of authority to regulate Atomic Energy Act materials for radiological health and safety. This authority is relinquished only through the execution of an agreement pursuant to Section 274b. of the Atomic Energy Act. Neither the Low-Level Radioactive Waste Policy Act, nor this Act, nor any compact ratified under its terms is intended to affect or alter the Federal-State relationship under the Atomic Energy Act. The Committee also views this paragraph as providing guidance to compact commissions and host States that health, safety, and environmental requirements should take precedence over the economic or institutional concerns of the host State or the compact region.

Paragraph (4) provides that except as expressly provided in the Low-Level Radioactive Waste Policy Act, nothing contained in the Act expands, diminishes, or otherwise affects State law. The Committee intends to preserve State law in all instance except those in which the operation of State law would undermine the Federal policy set forth in the Act.

Paragraph (5) preserves Federal law and the jurisdiction of Federal agencies with respect to provisions of this Act or the regional compacts. Paragraph (5)(B) clarifies the authority of NRC or the Agreement State to license low-level radioactive waste disposal facilities incorporating disposal technologies other than shallow-land burial.

SECTION 5—AVAILABILITY OF DISPOSAL CAPACITY

Section 5 specifies the restrictions to and conditions for continued out-of-region access to the existing low-level radioactive waste disposal facilities during the interim access period beginning January 1, 1986, and ending December 31, 1992. The existing disposal facilities are located in Barnwell, South Carolina; Richland, Washington; and Beatty, Nevada. Access to these facilities is conditioned upon waste-volume limitations and achievement on the part of non-sited regions or States of explicit milestones toward the development of new in-region or in-State disposal facilities. After 1992, any compact region may impose restrictions on out-of-region access to its low-level radioactive waste disposal facility at its own discretion.

The authority provided the States of South Carolina, Nevada and Washington in section 5(a) to limit the amount of low-level radioactive waste accepted for disposal at their respective regional disposal facilities is a key element of the Act. Section 5(a) authorizes the three sited States to limit the amounts of waste disposed of at the three existing facilities from in-region and out-of-region generators

over the entire 7-year interim access period. Also listed in this section are specific annual disposal figures for each of the three sites. The purpose of the annual figures is to trigger a mechanism that will ensure that each facility accepts waste at an approximately balanced rate, thus preventing any one particular disposal site from reaching its seven-year capacity limit well in advance of the remaining two facilities.

The calendar-year volume figures are intended to operate as follows: upon reaching its annual limitation, that particular disposal facility could temporarily cease accepting additional wastes until the other two disposal facilities have reached their annual limitations, at which time all three facilities would accept further wastes, in successive increments of 10 percent each, during the remaining period of that calendar year. It is anticipated that the additional 10 percent increments may be required during the first years of the interim-access period, but subsequently, as various volume-reduction technologies are adopted by waste generators, annual waste volumes accepted at the three disposal facilities are not expected to reach these calendar-year limitations. Paragraph (5) allows the State to grant first-priority access to generators within that compact region.

A summary of the 7-year volume caps and the calendar-year volume limitations for each of the three disposal facilities is given below:

[In million cubic feet]

Facility location	7-year cap	Calendar-year limitation
Barnwell	8.4	1.2
Hanford	9.8	1.4
Beatty	1.4	0.2

Section 5(b) provides that any State-imposed restrictions intended to limit the amount of disposal capacity available at any of the three disposal facilities must conform to this Act or to provisions of a valid State Agreement with the Nuclear Regulatory Commission. If, however, a disposal facility ceases operation or is forced to close due to an environmental or regulatory problem, that State would no longer be required to accept waste in accordance with this Section. However, it is the Committee's intent that nothing in this Act shall provide to State or compact regions any new authority to shut down disposal-facility operations.

Paragraph (1) of section 5(b) provides that no State or compact region may limit the amount of disposal capacity at one of these facilities except in accordance with section 5(a) or in accordance with a valid agreement under the Agreement States' program of the Atomic Energy Act. These provisions expressly affect State law in that they would preempt any State law directly limiting the amount of disposal capacity for low-level redioactive waste that could be made available at any of these facilities. The Committee does not intend to enact Federal limits to disposal capacity in these States as part of the scheme set forth in this Act only to find that

the States themselves have established other limits under State law.

Section 5(b)(1) does not preempt State authority to regulate low-level radioactive waste disposal under the Agreement States' program nor does it preempt any other State authority to protect public health and safety even though exercise of these authorities may indirectly limit volumes of low-level radioactive waste disposed of in the State. Thus, for example, this Act would not preempt State authority to regulate transportation of low-level radioactive waste within its borders, to require performance under contracts, including payment of fees, for waste disposal services, or to limit classes or types of waste disposed of for valid health and safety reasons.

Section 5(b)(1) would preempt any State law, regulation or order that simply and arbitrarily limits volumes of low-level radioactive waste disposed of unless that law, regulation or order established limits to such volumes in accordance with the provisions of this Act.

Section 5(c) lists the surcharges that may be imposed on out-of-region wastes being accepted for disposal at the Barnwell, Hanford, or Beatty sites. The fee schedule is graduated over the seven-year interim-access period so that the non-sited regions will feel ever-increasing pressure from their waste generators to expedite now disposal-site development. Furthermore, it is anticipated that disposal costs at new facilities will be higher than current costs, and the graduated surcharge fee is intended to parallel or exceed these new disposal costs, so that market forces will encourage new site development and usage.

After 1992, the surcharge fee imposed on out-of-region wastes may be set at any amount that the State deems appropriate.

Paragraph (2) of subsection 5(c) describes the method by which the surcharge fees are collected and transferred to appropriate accounts. The disposal facility operator would collect the surcharge fees upon receipt of any out-of-region wastes, just as the operator would normally collect any other applicable disposal fees, taxes, or handling charges. The operator would then transfer all surcharge fees collected to the State, according to a timetable and procedure determined by the State. The State must then transfer 25 percent of the total surcharge fees to the Secretary of Energy for deposit in an escrow account from which rebates to qualified host States may be made according to section 5(e). The remaining 75 percent of the surcharge fees would belong to the sited State at whose facility the surcharge fee was imposed.

Section 5(d) prescribes the volume allocations assigned to commercial nuclear power reactors during the interim access period. These allocations guarantee access to specific, but limited, volumes of disposal capacity at operating facilities. Remaining capacity is reserved for non-utility generators. Nuclear power reactor volume allocations are larger for boiling-water reactors (BWR's) than for pressurized-water reactors (PWR's), because larger amounts of waste are generated in the normal course of operation of a BWR compared to a PWR. Volume allocations are smaller during the 3 years at the end of the interim access period than they are during the first 4 years to account for the reduction in volume that is ex-

pected to be realized as volume-reduction technologies are adopted. Finally, volume allocations are greater for those plants located within a sited region, as compared to plants located outside of the sited regions.

The volume allocation figures were arrived at based on average volume-generation data provided by the Electric Power Research Institute, and assuming a definite amount of volume reduction over the 4-year and 3-year periods, respectively. The figures also take into account the startup of new nuclear powerplants that are now at various stages of construction. The net effect of these volume allocation figures will be to require an average volume reduction of approximately 30 percent for all reactor types over the entire interim-access period. The volume reduction burden placed on nuclear utilities is greater than that placed on non-utility generators of low-level waste, because it is assumed that utility generators can adopt volume-reduction measures more cost-effectively than can smaller non-utility generators of low-level radioactive waste.

The total allocations assigned to nuclear power reactors are determined by taking the appropriate monthly figure obtained from the table in paragraph (1) and multiplying by the total number of months in the applicable period. For new reactors that receive their full-power operating license after September 1984, no monthly "credit" (for purposes of calculation) is given to these reactors until their 16th month of operation, primarily because waste generation during the initial months of plant operation is insignificant compared to waste generation later on in the plant's operating life.

Nuclear powerplants may use their allocations at any time during the applicable 4-year and 3-year periods, may carry over any unused amounts, and can transfer any unused allocations to any person who wishes to obtain such allocations, provided that the utility relinquishing its allocation and the recipient of that allocation are located in compact regions or States in compliance with the milestones of Section 5(e) at the time of the transfer.

A special set-aside within the overall utility allocation is provided under paragraph (5). This set-aside, totaling no more than 800,000 cubic feet of capacity, may be allocated by the Secretary of Energy to utilities that require extra disposal capacity during periods of unusual operating, maintenance, repair, or safety activities that cause additional volumes of low-level waste to be generated. An example of a typical activity that would produce unusual volumes of low-level waste would be the cleaning or replacement of steam-generator tubing. The Secretary of Energy decides when to assign an allocation from the unusual volume set-aside upon a petition by the operator of the nuclear plant in need.

Access to disposal capacity under the allocation scheme of this subsection does not relieve any holder of an allocation from any of the regular and usual business requirements for such access that are applied to generators of low-level radioactive waste, such as payment of disposal fees, including surcharges, compliance with applicable regulations, and adherence to other limitations established in this Act.

Paragraph (6) sets an overall limit of 11,900,000 cubic feet of low-level waste for the three existing disposal facilities in the aggregate. No sited State is required to accept any additional volumes of

waste generated by commercial nuclear power reactors once this aggregate limit is reached.

The disposal capacity remaining at the three disposal facilities that will be available for non-utility use is 7,700,000 cubic feet. This figure translates into an average annual volume availability of 1,100,000 cubic feet per year, which is approximately equal to the total volume of non-utility wastes that was accepted at the three disposal facilities in 1984.

Section 5(e) addresses the milestones that non-sited States or regions must meet in order to continue to have access to the three disposal facilities during the interim access period. The purpose of the milestones is to ensure that adequate and measurable progress is achieved toward new disposal-site development. Table II summarizes the achievements required to meet each milestone.

Paragraph (1)(C) of section 5(e) requires that a contingency plan be filed to meet the January 1, 1990, milestone. Such a plan is not an alternative to the license application that must also be filed to meet this deadline. This contingency plan is to set forth in considerable detail the actions that will be taken to provide for the safe interim storage and disposal of low-level radioactive waste generated in the State in the event that a disposal facility will not be licensed in the State by January 1, 1993.

The Committee places considerable emphasis on this plan. By 1990 all States should be well along in the process of providing for the disposal after 1992 of their low-level radioactive waste. However, the Committee is aware that there are a number of ways in which the operation of planned-upon low-level radioactive waste disposal facilities could be delayed beyond 1992. The Committee emphasizes that, if this should occur, the responsibility for the storage and disposal of low-level radioactive waste would remain with the non-member State or the host State of the region in which the waste is generated. This contingency plan must convincingly set forth the way in which each such State will carry out this responsibility if the anticipated disposal facilities are not in operation by 1993.

Section 5(e)(1)(D) allows any non-sited State subject to the milestones to enter into an appropriate agreement with a compact commission for a region in which an operating disposal facility is located to provide for the disposal of the non-sited State's low-level radioactive waste. The State in which the disposal facility is located must approve the agreement.

The appropriateness of any such agreement is a matter to be settled by the parties to the agreements themselves. The Committee assumes that sited regions will refues to enter into any agreement that they view as detrimental to their interests. Nothing in the Act requires any party to enter into an agreement. On the other hand, one of the sited regions may be able to come to a mutually acceptable voluntary agreement with a non-sited State to dispose of the waste generated in that non-sited State. The Committee sees no reason why such an agreement would not be an acceptable solution to the provision of adequate low-level radioactive waste disposal capacity in the context of the policy set out in the Act. Therefore, the agreement would be an entirely acceptable substitute for compliance with the milestones of the Act.

This provision could also provide a useful safety valve—assuming acceptance by the affected sited region—for a non-sited State that is concerned that it may not, for whatever reason, be in compliance with one or more of the milestones. By a suitable "free-market" economic arrangement, such a State could, under this provision, protect its important waste generators from, for example, denial of access to disposal capacity and the concomitant risk of disruption to socially valuable activities.

TABLE II.—MILESTONES DURING INTERIM-ACCESS PERIOD

Milestone date	*Achievement*
July 1, 1986	All States shall have regional compacts or enacted legislation for "go-it-alone" status.
January 1, 1988	All regions shall have identified a host State; and The sites for new disposal facilities shall be indentified.
January 1, 1990	All license applications shall have been filed with the NRC; and A contingency plan and certification letter shall have been filed with DOE with respect to management of low-level waste disposal after 1992.

NOTE.—A State that has entered into a suitable agreement with a sited State concerning low-level radioactive waste disposal shall be deemed in compliance with all of the above milestones.

Under the bill, the penalty imposed on States missing a milestone would be determined by the sited State, who would have one of the following two alternatives to choose from:

(1) The sited State can deny access to disposal capacity altogether, or

(2) The sited State can continue to accept waste from the State or region in question, but may impose a penalty surcharge fee on any incoming waste.

This penalty scheme allows the sited State to adjust the applied penalty to the level they deem appropriate to the particular circumstances. Thus, a region that had displayed diligence and good faith efforts, yet was unable to meet a milestone on time, could receive a much less onerous penalty than a region that had deliberately blocked all efforts to develop its own disposal capabilities.

All penalty surcharges imposed on waste generators under this proposal would be reimbursable from the State of origin of the waste, thereby placing direct pressure on the State to conform to the milestone requirements of the Act as quickly as possible.

Incentives for meeting the milestones in the Act involve a rebate of 25 percent of all surcharge fees collected, to be transferred back to the State that has been identified for siting a new regional disposal facility. All such host States would be eligible for rebates during the portion of time that their region was in compliance with the milestones requirements. The total sum of money that would be available under this rebate system over the entire 7-year period is estimated to be at least $70,000,000. This amount would be shared equally by all eligible host States.

The Committee believes that the milestone requirements, penalties, and incentives contained in subsection (e) represent a manage-

able, yet flexible system that allows pressure to be applied to the proper parties, and in the proper magnitude, to encourage progress during the 7-year interim access period. The system avoids overly-prescriptive penalty formulae, and thus eliminates the need for the Congress to guess in advance just how large or small a stick is required to guarantee success.

Table III summarizes the major elements of subsection (e) with respect to penalties and incentives.

TABLE III.—SUMMARY OF PENALTIES AND INCENTIVES

A. Penalties for Missing Milestones

1. A State or region missing a milestone would be subject to the following penalties:

(a) denial of access to the disposal facility; or

(b) continued access to the disposal facility, subject to penalty surcharges imposed by the sited State.

2. Any penalty surcharges paid by a generator are subject to reimbursement from the State in which the generator is located.

B. Incentives for Meeting Milestones

A designated host State in a region that has achieved the milestone is elibible for rebates. The rebate funds are accrued by setting aside 25 percent of all surcharge monies collected in the sited regions. The funds are held by DOE and distributed to all eligible host States in proportion to their period of compliance with the applicable milestones.

Subsection (f) deals with final denial-of-access rights. In the case of a non-sited region, the denial-of-access rights take effect when that region's disposal facility commences operation, or by January 1, 1993, whichever occurs first. In the case of the Southeast, Northwest, and Rocky Mountain compact regions, their denial-of-access rights (other than those imposed as penalties under subsection (e)) commence on January 1, 1993.

Subsection (g) gives the States of South Carolina, Washington, and Nevada authority to obtain the data necessary to carry out their new role envisioned under this Act. Any generator or intermediate handler of low-level radioactive waste who fails to provide the requested information is subject to denial of access. Proprietary information is protected by placing prohibitions on the dissemination of trade secrets, proprietary information, and other confidential data.

The States of South Carolina, Washington, and Nevada are Agreement States and, as such, are already empowered to require submission of substantial amounts of data and information from private firms in order to safely regulate the disposal of low-level radioactive waste. Such information maybe sufficient for these States to carry out the role envisioned for them under this Act. To ensure that these States do have the authority necessary to carry out this role, the Committee included subsection (g), which would require the submittal of necessary information associated with new matters of concern to the three States under this Act. These matters relate to the new authority to limit disposal capacity under section 5(a), to impose surcharges under section 5(c), and to monitor the use of allocations of disposal capacity under section 5(d).

It is the Committee's intent that this authority to gather information not provide these three States with an opportunity to engage in burdensome and unnecessary collection of commercially sensitive information from private firms. Accordingly, the Commit-

tee included the provisions of section 5(g)(3) that require each of the three States to accept liability for the wrongful disclosure of any information collected under this subsection, and provide that each State and its employees be subject to the same requirements and the same penalties as would apply to the United States Government and to Federal employees in the handling of this information.

Subsection (h) provides emergency access to disposal capacity in extraordinary circumstances. Under this provision, the decision to grant or deny emergency access is a matter left entirely in the hands of the affected States. Thus, the Governor of a non-sited State must initiate the request for emergency access by notifying the Nuclear Regulatory Commission and the Governor of the sited State that a threat exists to public health and safety. The Governor of the sited State then determines if, and under what terms. access to his regional low-level radoactive waste disposal facility will be granted. The period of access, the amount of waste, and the surcharges imposed are left to the discretion of the Governor of the sited State.

In adopting this provision, the Committee was aware of the fact that an emergency-access provision could become a major escape clause by which States might be able to totally circumvent the requirements of the Act by artificially creating a public health and safety crisis in their State. Such a provision would make denial of access, as a penalty, totally meaningless.

The Committee decided not to involve the Federal Government in the emergency access process. The Committee believes that the emergency access provision of the bill is sufficiently narrow that it will deter the artificial creation of circumstances that would otherwise lead to an abuse of emergency access.

SECTION 6--RESPONSIBILITIES OF THE DEPARTMENT OF ENERGY

Section 6 of the Act describes the types of activities for which the Department of Energy will be responsible during the seven-year interim-access period.

These responsibilities include continued technical and financial assistance to States and compact regions for the development of new low-level radioactive waste disposal facilities. The technical assistance to be provided by the Department includes information on disposal siting guidelines, volume reduction technologies, transportation practices, health and safety concerns, and data monitoring. The Department would also provide financial assistance to States, to the extent that the DOE budget allows. The Committee is well aware of the technical expertise and activities that the Department has been providing to the States over the past several years in the area of low-level radioactive waste management. The Committee feels that these activities should not only continue, but also expand to the maximum extent possible, so as to be able to assist all States and compact regions of the country in meeting the requirements of the Act.

The annual reports required from the Department will enable Congress and the States to better monitor the progress in disposal site development, adoption of volume reduction technologies, and other important aspects of the bill.

SECTION 7—MIXED WASTES

Section 7 deals with the disposal requirements for mixed wastes that contain low-level radiation as well as hazardous materials. This section requires that the Nuclear Regulatory Commission, in consultation with the Environmental Protection Agency, promulgate regulations for the disposal of that mixed waste which the Commission believes can most safely and effectively be disposed of at low-level radioactive waste disposal facilities. In determining what regulations are required, however, the Commission would be required to ensure that the regulations provide a level of environmental protection at least equivalent to that in the Solid Waste Disposal Act.

The final step in resolving the mixed waste issue is the delegation of permitting and licensing authorities. Subsection (c) lays out these lines of authority. Under this subsection, the Administrator of the Environmental Protection Agency must enter into a Memorandum of Understanding with the Nuclear Regulatory Commission, delegating its permitting and enforcement authority to the NRC for the disposal of mixed wastes at low-level radioactive waste disposal facilities. This delegation of EPA's authority to NRC would supersede any prior delegation of EPA's authority to State agencies for the disposal of such mixed wastes. The NRC, in turn, is given the authority to delegate its permitting and enforcement functions to any Agreement State agency. The lines of authority so delineated will eliminate any dual-agency control of mixed waste disposal at low-level radioactive waste disposal facilities.

VIII. Cost and Budgetary Considerations

In compliance with paragraph 11(a) of Rule XXVI of the Standing Rules of the Senate, the following estimate of the costs of this measure has been provided by the Congressional Budget Office:

U.S. Congress,
Congressional Budget Office,
Washington, DC, November 18, 1985.

Hon. James A. McClure,
Chairman, Committee on Energy and Natural Resources, U.S. Senate, Dirksen Senate Office Building, Washington, DC.

Dear Mr. Chairman: The Congressional Budget Office has prepared the attached cost estimate for S. 1517, the Low-level Radioactive Waste Policy Amendments Act of 1985.

If you wish further details on this estimate, we will be pleased to provide them.

With best wishes,
Sincerely,

Rudolph G. Penner.

Congressional Budget Office—Cost Estimate

1. Bill number: S. 1517.
2. Bill title: Low-Level Radioactive Waste Policy Amendments Act of 1985.
3. Bill status: As ordered reported by the Senate Committee on Energy and Natural Resources, November 13, 1985.

4. Bill purpose: This bill modifies current policy regarding the disposal of low-level radioactive wastes. Under existing law, the disposal of most commercial wastes is considered a state responsibility that is best managed on a regional basis. States are authorized to enter into regional compacts to provide for disposal, but these compacts require Congressional approval. The law now provides that, after January 1, 1986, any region whose compact has been ratified by the Congress may restrict the use of its facility to wastes generated within the region.

S. 1517 revises the provisions governing state programs. It requires the three states that currently have facilities to continue to make disposal capacity available beyond January 1986 under certain conditions. The bill caps the total volume of waste that the three facilities must accept over the next seven years (1986 through 1992), and reduces the capacity available to electric utilities. These three "host" states are authorized to levy a graduated surcharge on the wastes disposed from other regions. Other states may use the three facilities through 1992, if they satisfy the milestones in the bill for developing their own disposal facilities by 1993. Meeting the milestones also entitles the prospective host states to a specified percentage of the surcharges levied by the three current host states. If states or regions miss the deadlines, the bill imposes financial penalties and authorizes access limitations. S. 1517 requires DOE to provide states and regions with specific technical guidelines and other financial assistance as provided in appropriation acts.

This bill also outlines the federal role in managing low-level radioactive wastes. It expands the definition of low-level waste, and specifies that all wastes not expressly assigned to the states shall be a federal responsibility. Within 12 months after the bill is enacted, the Department of Energy (DOE) must report to the Congress on how it will ensure the safe disposal of these "orphan" wastes. The Department also must submit annual reports on waste generation, transportation and disposal matters. In addition, DOE must create and maintain an escrow account for the state surcharge funds that may be paid to other states or regions that comply with the milestones.

Finally, S. 1517 directs the Nuclear Regulatory Commission (NRC) to develop regulations on certain low-level radioactive wastes. The NRC, with the concurrence of the Environmental Protection Agency (EPA), also must issue regulations on the disposal of "mixed" wastes.

5. Estimated cost to the Federal Government:

[By fiscal years, in millions of dollars]

	1986	1987	1988	1989	1990
Estimated authorization level	6.5	6.2	3.2	2.0	2.0
Estimated outlays	3.5	5.9	4.9	2.6	2.2

Additional costs could be incurred as a result of the provision making the disposal of "orphan" wastes a federal responsibility, but such costs cannot be estimated at this time.

The costs of this bill fall within budget function 270.

Basis of estimate: It is assumed for this estimate that the bill will be enacted early in fiscal year 1986, and that all of the funds authorized will be appropriated. In addition, CBO assumes that legislation ratifying the pending regional compacts will be enacted in tandem with this bill.

Federal spending would increase by a total of $19 million over the 1986–1990 period, because of the provisions in the bill regarding technical assistance, reports and regulations, and state surcharges on wastes disposed at the three commercial facilities. Approximately $6 million of this total would be spent by DOE to develop the technical guidelines specified in the bill. Under current policy, the type of technical and financial assistance provided to states is discretionary.

Preparing studies and issuing regulations would increase federal expenditures by a total of about $9 million over the fiscal years 1986 through 1990. Most of this increase would occur at the NRC, which would expect to spend about $6 million by 1990 to complete the regulations required by the bill. The DOE's expenses are expected to increase by about $3 million, because of the bill's reporting requirements. EPA would expect to spend a total of $0.1 million for its rulemaking activities.

In addition, the government would have to pay the surcharge on federal wastes being disposed in the three host states. Assuming that the states levy the surcharge and that federal disposal patterns follow historical trends, the federal government would pay a total of about $4 million over the 1986–1990 period.

Making the federal government responsible for "orphan" wastes could increase federal costs, especially if DOE needs to develop a new facility for these wastes. At present, DOE only disposes of certain federally owned or generated wastes, and its facilities are exempt from NRC licensing procedures. This bill expands the federal role by making the government responsible for all low-level radioactive wastes that are not assigned to states. The cost to the government will depend on whether DOE would have to dispose of the new wastes at a licensed facility, and, if so, how much of the federal cost could be recovered by fees paid by the generators. These issues will not be resolved until DOE completes the study required by the bill. If DOE has to develop such a facility, the cost to the government before any recoupment would total about $20 million.

Other provisions in the bill are expected to have no significant budget impact.

6. Estimated cost to State and local governments: The provisions authorizing host states to levy surcharges on certain wastes would increase revenues to those states and to states that comply with the milestones. CBO estimates that the surcharge would yield a total of about $170 million, excluding any accrued interest, over the 1986–1990 period. At least 75 percent of this total would go to the host states (Washington, South Carolina and Nevada). These estimates assume the states would levy the maximum surcharge, and that the proportion of out-of-region wastes would follow historical trends. Any publicly owned sources liable for the surcharge would be expected to pass such costs through to contractors or customers, resulting in no significant cost to State or local governments.

7. Estimate comparison: None.

8. Previous CBO estimate: CBO previously estimated the cost of H.R. 1083, as ordered reported by the House Committee on Interior and Insular Affairs, July 31, 1985 and by the House Committee on Energy and Commerce, October 29, 1985. These estimates were transmitted on October 3, 1985, and November 8, 1985, respectively. The differences among the estimates reflect differences in the provisions in the bills.

9. Estimate prepared by: Kathy Gramp.

10. Estimate approved by: James L. Blum, Assistant Director for Budget Analysis.

The Committee believes that the costs of the activities of the Secretary, the Commission and the Administrator under this Act can be absorbed within funds otherwise available to the Secretary, the Commission and the Administrator.

Regulatory Impact Evaluation

In accordance with paragraph 11(b) of Rule XXVI of the Standing Rules of the Senate, the Committee makes the following evaluation of the regulatory impact of S. 1517 as reported.

This bill is not a regulatory measure in the sense of imposing Government-established standards or significant economic responsibilities on private individuals or businesses. The bill does not assign new regulatory responsibilities to the Federal Government, nor does it require new regulatory programs operated by State or local government.

The primary purpose of the bill is to allocate responsibilities between the States and the Federal Government and among States for providing disposal capacity for certain low-level radioactive waste. The bill will have a significant impact on the two private firms that operate on a contract basis the three existing low-level radioactive waste disposal sites. In addition, the operators of approximately 95 nuclear power reactors currently licensed to produce electricity and several tens of thousands of other private and public entities that generate low-level radioactive waste in the course of their operations may be required under provisions included in the bill to report additional data and information to the States in which these existing disposal facilities are located. This reporting will cause some additional paperwork, but economic impact of the paperwork is expected to be small, because in many instances this information is already being reported to Federal and State regulatory authorities.

There is no impact on personal privacy from S. 1517.

X. Executive Communications

STATEMENT OF
JAMES W. VAUGHAN, JR.
ACTING ASSISTANT SECRETARY FOR NUCLEAR ENERGY
BEFORE THE
SUBCOMMITTEE ON ENERGY RESEARCH AND DEVELOPMENT
COMMITTEE ON ENERGY AND NATURAL RESOURCES
AND THE
SUBCOMMITTEE ON NUCLEAR REGULATION
COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS
U.S. SENATE

OCTOBER 8, 1985

Mr. Chairman, I am pleased to appear this morning to present the Department's views on S. 1517, as modified by Amendment 583, and S. 1578, the "Low-Level Radioactive Waste Policy Act Amendments of 1985." S. 1578 contains the same language as Amendment 583 to S. 1517.

There is a similar bill currently before Congress--H.R. 1083--which would also amend the Low-Level Radioactive Waste Policy Act passed in 1980. H.R. 1083 was reported out of the House Interior and Insular Affairs Committee on July 31, 1985.

INTRODUCTION

Both S. 1517, as modified by Amendment 583, and S. 1578 provide a useful framework for the development of consistent and comprehensive solutions to the stalemate that has delayed congressional consent to proposed interstate compacts for the management of low-level radioactive waste. The recognition by the Governors of the states with disposal facilities of the need to accommodate a 7-year transition period after January 1, 1986 has provided a spirit of cooperation that should allow for continued progress toward developing new disposal capacity nationwide. During this period,

states without disposal sites can continue to dispose of their wastes while developing new disposal facilities. The Department will make available technical expertise to the compact regions and States in fulfilling their responsibilities in this area.

We recognize and support the general approach being taken by S. 1517, as modified by Amendment 583, and S. 1578 to amend the Low-Level Radioactive Waste Policy Act, namely to continue the current practice of disposing of civilian and certain Federal agency wastes at commercially operated facilities and minimize changes to the proposed interstate compacts themselves. This approach avoids potential problems associated with the possible reevaluation and reratification of compacts by individual State legislatures. The Department favors both the passage of this important legislation as well as the timely consent to the interstate compacts that have been submitted to the Congress.

S. 1517, as modified by Amendment 583, and S. 1578 correspond to H.R. 1083 before the latter was amended and reported by the House Committee on Interior and Insular Affairs. While the Department has no major objections to the final markup of H.R. 1083, we believe the proposed amendments to the Low-Level Radioactive Waste Policy Act being considered today--as well as H.R. 1083--can be further clarified and strengthened.

POTENTIAL PROBLEMS

There are two potential problems with S. 1517, as modified by Amendment 583, and S. 1578 that deserve further consideration by the Congress: (1) States' responsibilities during the transition period, and (2) the availability of disposal capacity for non-utility waste generators.

States' Responsibilities During the Transition Period

As recommended in our February 1985 report to Representative Udall concerning compact viability,[1] the Department believes that continued access by non-sited States and compact regions should be based upon progressive plans and schedules developed by those States and regions. We note that the proposed legislation does include several specific milestones that must be met to assure continued access to current disposal facilities. However, we believe that the provisions on limited availability of regional disposal facilities (section 7 of S. 1517 and section 5 of S. 1578) could be strengthened to ensure continued progress toward development of new disposal capacity by 1993.

The problem we foresee is that if a State or compact region does not meet these specific milestones, the penalties contained in S. 1517, as modified by Amendment 583, and S. 1578 accrue primarily to the waste generators within that State or compact region, either by loss of access to a disposal site or by increased disposal fees, or both. Congress may wish to clarify

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[1] Report DOE/NE-0058, "Considerations for Evaluating Proposed Low-Level Radioactive Waste Compacts," February 1985.

the specific responsibilities of States for managing their low-level waste if the milestones are not met.

It would be a particularly unfortunate development if States that did not pursue compact formation or development of their own disposal facilities required their waste generators to store waste on a prolonged interim basis. This could be inadvisable from technical, environmental, financial, and policy standpoints. We believe this view is consistent with the intent of Congress when it enacted the Low-Level Radioactive Waste Policy Act in 1980, and today as it considers amending that Act.

Availability of Disposal Capacity for Non-Utility Waste Generators

The second potential problem that we foresee relates to providing assurances to non-utility low-level waste generators, such as hospitals and universities, that adequate disposal capacity is available to them at currently operating sites during the 7-year transition period that would begin on January 1, 1986. Section 5(a)(2) of S. 1517, as modified by Amendment 583, and S. 1578 may not go far enough to assure that adequate disposal capacity is available, since access is subject to "the provisions of subsections (b) through (k)...", i.e., limitations on the availability of disposal capacity. Therefore, Congress may wish to consider strengthening the language of section 5(a)(2) to assure the availability of disposal capacity during the transition period for non-utility low-level waste generators.

ADDITIONAL SPECIFIC RECOMMENDATIONS

Two additional changes that we feel should be incorporated into the final version of an amendment to the Low-Level Radioactive Waste Policy Act pertain to (1) ownership of Federal waste and (2) emergency access for national security reasons.

Ownership of Federal Waste

The Department recommends that section 4(b)(2) of both S. 1517, as modified by Amendment 583, and S. 1578 be revised so that the word "produced" is changed to the word "owned". The key phrase would then read, "...disposal of low-level radioactive waste owned by the Federal Government..." (emphasis added). This clarification is necessary because, in rare instances, the Department has accepted title to low-level radioactive waste not produced by the Federal Government.

Emergency Access for National Security Reasons

Section 5(h) of both S. 1517, as modified by Amendment 583, and S. 1578 provides for access to disposal facilities based on a determination of a threat to public health and safety. While we fully agree with the intent of such a provision, an equally essential provision should be included to assure that national security is not compromised. The Department recommends that section 5(h) be modified to allow the President or his designee to grant access to any operating disposal facility for low-level radioactive waste generated as a result of activities of the Department of Defense if there is no disposal facility in operation in the State or region of origin and disposal of the waste is required for reasons of

national security. Specifically, section 5(h), EMERGENCY EXEMPTIONS, should be modified by adding new paragraph (1), as follows:

> "(1) The President or his designee may grant emergency access to any operating disposal facility for low-level radioactive waste generated by Department of Defense activities if the President or his designee determines that there is no disposal facility in operation in the State or region where the waste was generated and that disposal of such waste is necessary to assure national security."

Existing paragraph (1) and the remaining subsections should be redesignated (2) through (5), respectively.

We have reviewed this approach with Department of Defense officials, who agree with the necessity for such a provision.

DOE RESPONSIBILITIES UNDER S. 1517 AND S. 1578

Both S. 1517, as modified by Amendment 583, and S. 1578 would expand the present scope of low-level radioactive waste management activities performed by the Department.

Since 1980, the Department has assisted States to meet their responsibilities under the Low-Level Radioactive Waste Policy Act. In the past year, the Department has provided technical assistance to States and interstate compact regions for siting and developing new low-level waste disposal sites.

Orphan Waste Report

Both S. 1517, as modified by Amendment 583, and S. 1578 require that the Secretary of Energy develop and submit to Congress a comprehensive report that would recommend measures to resolve the issues related to the safe disposal of radioactive waste that is not provided for under other Federal law and for which the Secretary determines disposal as low-level waste may not be viable. This report is required to be completed within 12 months following enactment. We believe we can meet that schedule and provide recommendations to Congress for this category of radioactive waste. It is likely that implementation of the recommendations embodied in the Department's report would require additional congressional action with regard to assignment of responsibility for disposal of this category of radioactive waste. We will be pleased to provide whatever assistance is needed to support congressional consideration and determinations of these issues.

Departmental Assistance to Compact Regions and States

S. 1517, as modified by Amendment 583, and S. 1578 direct the Secretary of Energy to provide technical and financial assistance to compact regions and States for purposes of assisting them in fulfilling their responsibilities under the proposed legislation.

The Department opposes providing continued financial assistance because such additional direct financial assistance to compact regions and States will not contribute significantly to the formation of additional compacts. The Department's role should continue to be limited to providing technical assistance to States and regions, to the extent made possible by

appropriations. Such technical assistance should continue to be limited to consultation and review of site selection and development planning and licensing procedures. In addition, both the Department and the U.S. Nuclear Regulatory Commission conduct programs that provide information on waste form technology, alternative disposal technology, and waste storage and treatment options.

Low-Level Waste Management System Report

S. 1517 proposes to have the Secretary of Energy prepare and submit an annual report to the Congress that would summarize the progress of low-level waste disposal siting and licensing activities nationwide. S. 1578 differs from S. 1517 in that it requires a review every 5 years.

We support the preparation of an annual report as proposed in S. 1517, but only during the 7-year transition period. An annual report will keep Congress and the States informed on a timely basis of the progress being made by the States and interstate compact regions toward development of new disposal capacity during the transition period. The need for additional reports to Congress should be examined in 1992 after completion of the transition period.

It should be noted, however, that providing the information that section 5(b) of S. 1517 requires in an annual report would require a survey of the entire waste management and disposal industry, including full disclosure of waste generation, treatment, storage, and shipping practices. It will take time to develop a comprehensive data base, since much of the information required in section 5(b) has not been sought before. Some of

the information needed may be considered sensitive by waste generators or waste treatment, transportation, and waste disposal companies. The completeness of such an annual report to Congress will depend on the degree of cooperation obtained in a voluntary request for information from the organizations that generate, manage, and dispose of low-level radioactive waste.

SUMMARY

The Department believes that congressional consideration of the two potential problems we have noted in this statement will lead to a strengthened amendment to the Low-Level Radioactive Waste Policy Act. First, we believe that waste generators should not be unduly penalized--either by loss of access or in higher disposal fees--if States or regions fail to meet their obligations under S. 1517, as modified by Amendment 583, or S. 1578. Second, we believe that the availability of disposal capacity for non-utility waste generators should be assured.

In addition, we have made two specific recommendations which we believe would further clarify and strengthen both S. 1517, as modified by Amendment 583, and S. 1578. Emergency access to operating disposal sites for national security reasons should be allowed, and low-level radioactive waste disposal facilities operated exclusively for waste owned by the Federal Government should not be subject to any compact or action taken under a compact.

Finally, we continue to see a rather limited role for the Department of Energy to play as States and regions provide the necessary new disposal capacity for low-level waste generated within their borders. The Department will be pleased to continue providing technical support to compact regions and States, but opposes any provision that would require the Federal Government to provide direct financial assistance.

S. 1517, as modified by Amendment 583, and S. 1578--together with H.R. 1083--provide a useful framework for proceeding with the congressional consent to interstate compacts and development of new disposal capacity. Each proposal offers a compromise for those States that host operating low-level radioactive waste disposal sites and those States that require additional time to develop new disposal sites. The Department favors the passage of such legislation this session, as well as timely consent to the interstate compacts that have been submitted to the Congress for consideration. We encourage the Subcommittee to consider the recommendations we have made this morning and to resolve any outstanding issues that could prevent enactment of this important legislation by the Ninety-Ninth Congress.

This concludes my statement. I would be pleased to respond to any questions you may have.

TESTIMONY OF

UNITED STATES NUCLEAR REGULATORY COMMISSION

CONCERNING S.1517, S.1578, H.R. 1083

AMENDMENTS TO THE LOW-LEVEL RADIOACTIVE WASTE POLICY ACT

GIVEN BY: WILLIAM J. DIRCKS, EXECUTIVE DIRECTOR FOR OPERATIONS

BEFORE THE

SENATE SUBCOMMITTEE ON ENERGY AND RESEARCH AND DEVELOPMENT

COMMITTEE ON ENERGY AND NATURAL RESOURCES

AND THE

SENATE SUBCOMMITTEE ON NUCLEAR ENERGY

COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS

OCTOBER 8, 1985

MR. CHAIRMAN AND MEMBERS OF THE SUBCOMMITTEES:

I AM WILLIAM J. DIRCKS, THE NUCLEAR REGULATORY COMMISSION'S EXECUTIVE DIRECTOR FOR OPERATIONS.

I AM APPEARING BEFORE YOU TODAY TO DISCUSS AMENDMENTS TO THE LOW-LEVEL RADIOACTIVE WASTE POLICY ACT OF 1980 -- SPECIFICALLY S.1517 AND S.1518. THE APPROACH ADOPTED IN BOTH BILLS IS SIMILAR TO THAT FOUND IN H.R. 1083 AS REPORTED BY THE HOUSE COMMITTEE ON INTERIOR AND INSULAR AFFAIRS.

THE U.S. NUCLEAR REGULATORY COMMISSION CONSIDERS IT IMPORTANT FROM A HEALTH, SAFETY, AND ENVIRONMENTAL REGULATORY PERSPECTIVE THAT SAFE LOW-LEVEL WASTE DISPOSAL FACILITIES ARE AVAILABLE TO THE GENERATORS OF LOW-LEVEL WASTE. IN LIGHT OF THE UNWILLINGNESS OF THE THREE STATES WITH OPERATING DISPOSAL SITES TO CONTINUE TO ACCEPT THE COUNTRY'S LOW-LEVEL RADIOACTIVE WASTE INDEFINITELY, THE COMMISSION SUPPORTS CONGRESSIONAL EFFORTS TO CLARIFY THE IMPLEMENTATION OF THE LOW-LEVEL RADIOACTIVE WASTE POLICY ACT AND THE COMPACTS.

THE NRC HAS PREVIOUSLY TESTIFIED BEFORE THE SENATE COMMITTEE ON THE JUDICIARY IN THE 97TH, 98TH AND THE 99TH CONGRESS ON PENDING COMPACTS. THE COMMISSION BELIEVES THAT ALL COMPACTS SHOULD BE

CONSISTENT WITH THE FEDERAL SCHEME FOR REGULATION OF LOW-LEVEL RADIOACTIVE WASTE. IN THIS REGARD, IT IS PARTICULARLY IMPORTANT TO PRESERVE EXISTING NRC, DEPARTMENT OF TRANSPORTATION AND AGREEMENT STATE HEALTH, SAFETY AND ENVIRONMENTAL REGULATORY AUTHORITY IN THE AREAS OF PACKAGING, TRANSPORTATION, AND WASTE DISPOSAL.

A NUMBER OF STATE OFFICIALS HAVE TESTIFIED THAT IT IS NOT THEIR INTENTION TO DUPLICATE, CHANGE OR INTERFERE WITH CURRENT FEDERAL REGULATION. HOWEVER, THE COMPACTS THEMSELVES ARE UNCLEAR IN THIS REGARD. WE RAISE THIS ISSUE BECAUSE OF THE INTERLOCKING DEFINITIONS IN THE COMPACTS AND FUNCTIONS ASSIGNED TO COMPACT COMMISSIONS WHICH APPEAR TO GIVE THEM ASPECTS OF REGIONAL HEALTH AND SAFETY REGULATORY AUTHORITY, WITH POSSIBLE PREEMPTION OF EXISTING FEDERAL REGULATORY AUTHORITY. THE COMMISSION SUPPORTS CLARIFYING STATUTORY LANGUAGE IN ANY LEGISLATION AMENDING THE LOW-LEVEL RADIOACTIVE WASTE POLICY ACT AND IN MODIFICATIONS TO SOME OF THE PROVISIONS OF THE VARIOUS COMPACTS. CLARIFYING STATUTORY LANGUAGE WOULD SERVE TO EMPHASIZE THE INTENT OF CONGRESS TO PRESERVE FEDERAL AUTHORITY AND WOULD HELP ENSURE UNIFORM TREATMENT BY THE COURTS.

THE COMMISSION HAS ALSO TESTIFIED THAT IT BELIEVES THAT THERE SHOULD BE A NATIONALLY ACCEPTED DEFINITION OF LOW-LEVEL RADIOACTIVE WASTE THAT IS IDENTICAL FOR ALL COMPACTS AND STATES.

SIMILARLY WE URGE CLARIFYING STATUTORY LANGUAGE IN ANY LEGISLATION AMENDING THE LOW-LEVEL RADIOACTIVE WASTE POLICY ACT.

IN MY TESTIMONY TODAY, I WOULD LIKE TO FOCUS ON FOUR AREAS OF PARTICULAR CONCERN TO THE COMMISSION. THE FIRST IS THE SO-CALLED "ORPHAN WASTE" ISSUE.

1. A HOME FOR ALL RADIOACTIVE WASTE

THE NRC CONSIDERS IT IMPORTANT FROM A HEALTH, SAFETY, AND ENVIRONMENTAL REGULATORY PERSPECTIVE THAT ALL RADIOACTIVE WASTES HAVE A STATE OR FEDERAL "HOME" FOR DISPOSAL. I AM REFERRING HERE PARTICULARLY TO ALL-NRC REGULATED WASTES, INCLUDING TRANSURANIC-CONTAMINATED WASTES. FOR ANY GIVEN WASTE THERE SHOULD BE NO QUESTION WHETHER THE RESPONSIBILITY TO PROVIDE FOR DISPOSAL RESTS WITH THE STATES (INDIVIDUALLY OR THROUGH REGIONAL COMPACTS), OR THE FEDERAL GOVERNMENT. THERE SHOULD ALSO BE NO QUESTION THAT BOTH THE FEDERAL GOVERNMENT AND THE STATES ARE TO ACCEPT THESE WASTES BY A GIVEN DATE.

UNDER CURRENT NRC REGULATIONS, LOW-LEVEL WASTE THAT MAY BE ROUTINELY DISPOSED OF IN NEAR-SURFACE DISPOSAL FACILITIES IS

DIVIDED INTO THREE CATEGORIES A, B, AND C, WITH CLASS C POSING THE GREATEST HAZARD. THE REGULATIONS ALSO PROVIDE THAT THE NRC MAY, ON A CASE-BY-CASE BASIS, AUTHORIZE DISPOSAL OF LOW-LEVEL RADIOACTIVE WASTE WITH RADIOACTIVE CONCENTRATIONS EXCEEDING CLASS C LEVELS.

H.R. 1083 PROVIDES THAT THE STATES WOULD BE ASSIGNED RESPONSIBILITY FOR THE DISPOSAL OF CLASS A, B, AND C WASTES BUT WOULD NOT BE REQUIRED TO DISPOSE OF WASTES EXCEEDING CLASS C CONCENTRATIONS. THE PROPOSED LEGISLATION DOES NOT PROVIDE A "HOME" FOR SUCH WASTES. INSTEAD, IT WOULD DIRECT THE SECRETARY OF ENERGY TO PROVIDE A REPORT TO CONGRESS WHICH WOULD IDENTIFY RADIOACTIVE WASTE FOR WHICH NEITHER THE FEDERAL GOVERNMENT NOR THE STATES HAVE RESPONSIBILITY UNDER EXISTING FEDERAL LAW AS WELL AS IDENTIFY FEDERAL AND NON-FEDERAL OPTIONS FOR DISPOSAL OF SUCH RADIOACTIVE WASTE. THIS REPORT IS TO BE COMPLETED TWELVE MONTHS AFTER H.R. 1083 BECOMES LAW. THEREAFTER, CONGRESS WOULD BE EXPECTED TO ENACT LEGISLATION ASSIGNING A HOME TO THE CLASSES OF WASTE IDENTIFIED.

THE NRC OPPOSES THIS APPROACH. WE BELIEVE THE LEGISLATION PENDING BEFORE CONGRESS SHOULD PROVIDE A HOME FOR ALL RADIOACTIVE WASTE. THE CENTRAL THRUST OF H.R. 1083 IS THAT STATES SHOULD MOVE PROMPTLY TO SITE, DESIGN AND CONSTRUCT LOW-LEVEL WASTE DISPOSAL FACILITIES. WE BELIEVE THAT THERE IS THE POTENTIAL THAT THIS PROCESS WILL BE SLOWED DOWN IF THERE IS UNCERTAINTY AT THE OUTSET

REGARDING WHAT TYPES OF WASTES THE FACILITY MUST BE DESIGNED TO HOLD. WE WOULD ALSO LIKE TO ELIMINATE THE POSSIBILITY THAT A FACILITY UNDER CONSTRUCTION WOULD HAVE TO BE REDESIGNED TO ACCEPT ADDITIONAL TYPES OF WASTES. FINALLY, FROM A HEALTH, SAFETY AND ENVIRONMENTAL PERSPECTIVE WE BELIEVE THAT ALL LOW-LEVEL WASTE GENERATORS SHOULD BE GIVEN AN ASSURANCE NOW THAT A FACILITY WILL BE AVAILABLE TO HANDLE ALL TYPES OF WASTE. IF FACILITIES ARE NOT AVAILABLE FOR CERTAIN CLASSES WASTES, AT SOME POINT IN THE FUTURE THE SUSPENSION OF ALL NRC REGULATED ACTIVITIES WHICH PRODUCE "ORPHAN" WASTE MIGHT BE REQUIRED.

2. Regulatory Uncertainties Not Addressed by H.R. 1083

Our second concern is that the proposed legislation does not comprehensively address the relationship between the Low-Level Waste Policy Act and The Resource Conservation and Recovery Act ("RCRA").

Section 15(c) of H.R. 1083 directs the Administrator of the Environmental Protection Agency (EPA) to enter into an agreement with the NRC to delegate authority to NRC to issue permits for management of mixed wastes (wastes that contain radioactive material regulated by the NRC as well as other hazardous waste regulated by EPA). To eliminate regulatory uncertainty,

ADDITIONAL LEGISLATIVE CLARIFICATION IS NEEDED REGARDING THE ROLE OF THE STATES IN REGULATING MIXED-WASTES.

H.R. 1083 DOES NOT CLEARLY SPECIFY THAT THE DELEGATION OF AUTHORITY FOR MIXED WASTES FROM EPA TO NRC WOULD SUPERSEDE ANY PRIOR DELEGATIONS OF AUTHORITY BY EPA TO THE STATES TO ISSUE PERMITS THAT MAY BE APPLICABLE TO NRC-LICENSED DISPOSAL FACILITIES. WITHOUT SUCH LEGISLATIVE CLARIFICATION, SECTION 15 MAY BE CONSTRUED TO PROVIDE THAT THE NRC IS TO BE DELEGATED AUTHORITY IN ADDITION TO SUCH STATES, AND NRC-LICENSED FACILITIES WITHIN THESE STATES WOULD BE SUBJECT TO DUAL NRC-STATE AGENCY REGULATION UNDER RCRA.

A SECOND MATTER THAT WARRANTS CLARIFICATION RELATES TO THE RELATIONSHIP BETWEEN RCRA AND AGREEMENT STATES. H.R. 1083 IS SILENT REGARDING WHETHER THE DELEGATION OF RCRA AUTHORITY FROM EPA TO THE NRC CAN IN TURN BE DELEGATED BY THE NRC TO AGREEMENT STATES AUTHORIZED TO REGULATE LOW-LEVEL WASTE DISPOSAL FACILITIES UNDER SECTION 274B. OF THE ATOMIC ENERGY ACT. WE BELIEVE THAT AGREEMENT STATES SHOULD BE AUTHORIZED TO ISSUE RCRA PERMITS FOR MIXED WASTE DISPOSAL AT AGREEMENT STATE-LICENSED DISPOSAL FACILITIES PURSUANT TO THE EPA-NRC AGREEMENT UNDER SECTION 15. THE STATES WOULD CARRY OUT THIS FUNCTION UNDER NRC OVERSIGHT RATHER THAT UNDER THE OVERSIGHT OF BOTH NRC AND EPA.

3. Regulatory Burdens

H.R. 1083 would direct the NRC to address three matters through rulemaking, address two matters potentially through rulemaking, concur in two EPA rules, and establish procedures for processing disposal facility license applications. Most of these activities would need to be completed within a year of enactment of the legislation. This represents a large workload to be handled by the NRC on an expedited basis. The NRC is concerned that it might not be able to promulgate rules in the timeframe contemplated by Congress. This could hinder State efforts to meet the milestones set forth in the legislation.

Section 11 of H.R. 1083, for example, would require NRC to promulgate by rule criteria for licensing disposal facilities using alternatives to shallow-land burial. The Commission's regulations currently permit persons to apply for approval of alternative disposal methodologies. The Commission has directed the NRC staff on a priority basis to develop the necessary technical guidance for applicants who may wish to pursue alternative methodologies. The statutory mandate to promulgate rules could be interpreted to require the Commission to adopt further regulations for all alternatives to shallow-land disposal. Thus, the Commission's current initiatives on alternatives could be slowed down if further rulemaking is statutorily required. We

ESTIMATE THAT FURTHER RULEMAKING WOULD REQUIRE A MINIMUM OF TWO YEARS TO COMPLETE FOLLOWING ENACTMENT.

ANOTHER EXAMPLE IS THE REQUIREMENT IN SECTION 6(K) WHICH WOULD DIRECT THE NRC WITHIN SIX MONTHS AFTER ENACTMENT OF THE LEGISLATION TO ESTABLISH CRITERIA AND PROCEDURES FOR GRANTING EMERGENCY ACCESS TO CURRENTLY OPERATING DISPOSAL FACILITIES. IT WOULD BE VIRTUALLY IMPOSSIBLE FOR US TO DEVELOP A PROPOSED RULE, SOLICIT PUBLIC COMMENTS, EVALUATE THE COMMENTS AND PROMULGATE A FINAL RULE WITHIN SIX MONTHS. OUR GOAL FOR COMPLETING THIS PROCESS IS NOW 24 MONTHS. A 6 MONTH DEADLINE FOR PROMULGATING GUIDANCE IS MUCH MORE REASONABLE BECAUSE GUIDANCE COULD BE PROVIDED THROUGH LESS FORMAL MEANS THAN RULEMAKING.

IN SUM, TO MEET THE VARIOUS DEADLINES CONTAINED IN THE PROPOSED LEGISLATION, THE NRC SHOULD BE GIVEN THE MAXIMUM REGULATORY FLEXIBILITY TO SELECT THE MOST APPROPRIATE PROCEDURES FOR PROVIDING THE GUIDANCE, TAKING INTO ACCOUNT THE NEED FOR RIGOROUS TECHNICAL REVIEWS, PUBLIC PARTICIPATION AND THE NEED FOR TIMELY ACTION.

4. Missed Milestone Certification

The Commission supports the provision that states missing the 1990 milestone for submitting an application to construct a disposal facility, are to provide written certification that the state will manage the state's waste after 1992.

The bill now provides that the certification should be made to the NRC. The bill does not provide a mechanism to assure that the state will meet its obligations.

The NRC believes the non-sited State certification should be made to the gen-erators and owners of the waste as well as to the sited States rather than to NRC because they are the parties most directly affected by the State's failure to meet the milestone. The legislation should also be modified to provide the generators and owners, as well as sited States a mechanism for ensuring that the non-sited state fulfills its commitments.

Before closing, I wish to emphasize that there are also other areas of concern to the Commission. Therefore, we are providing for the record a detailed analysis of H.R. 1083 that includes all areas of Commission interest embodied in S. 1517, S. 1578, and H.R. 1083. The analysis reflects the Commission's general support for the legislative approach set forth in the bills, but contains recommendations on how the legislation can be improved. You will

NOTE THAT OUR SUGGESTIONS, IF ADOPTED, WOULD ELIMINATE THE CONCERNS THAT WE EXPRESSED TO THE 99TH CONGRESS REGARDING THE SPECIFIC LANGUAGE CONTAINED IN THE VARIOUS REGIONAL COMPACTS THAT ARE NOW BEFORE CONGRESS.

EARLIER IN OUR TESTIMONY WE EXPRESSED CONCERNS ABOUT COMPACT LANGUAGE. WE ARE ALSO PROVIDING A SECOND DOCUMENT FOR THE RECORD WHICH SETS FORTH OUR CONCERNS WITH THE SEVEN COMPACTS NOW BEFORE CONGRESS, AND ADDRESSES WHETHER H.R. 1083 AND S. 1578 WOULD CURE THOSE DEFICIENCIES. IN OUR VIEW, H.R. 1083 RESOLVES OUR CONCERNS WITH THE EXCEPTION OF ISSUE 10 IN OUR DETAILED ANALYSIS OF H.R. 1083.

YOU HAVE ASKED US TO ADDRESS THE ISSUE WHETHER IT IS PREFERABLE TO AMEND THE COMPACTS TO SATISFY THE NRC CONCERNS BY ENACTMENT OF GENERIC LEGISLATION SUCH AS S.1578, OR WHETHER CONGRESS SHOULD MODIFY THE COMPACTS AS PART OF THE LEGISLATION CONSENTING TO EACH SPECIFIC COMPACT. WE BELIEVE THE MOST EFFICIENT WAY FOR THE CHANGES TO BE MADE IS THROUGH GENERIC LEGISLATION PROVIDED: (A) IT IS CLEAR THAT CONGRESSIONAL RATIFICATION OF THE COMPACTS IS CONTINGENT UPON THE TERMS SET FORTH IN THE GENERIC LEGISLATION, AND (B) AS A RESULT OF THE GENERIC LEGISLATION THE STATES WOULD NOT FEEL COMPELLED TO MAKE CHANGES TO THE COMPACTS OTHER THAN THOSE MANDATED BY CONGRESS.

THIS CONCLUDES MY PREPARED REMARKS. THANK YOU.

U.S. NUCLEAR REGULATORY COMMISSION
COMMENTS
ON THE AMENDED H.R. 1083
AS ADOPTED BY THE
HOUSE COMMITTEE ON INTERIOR AND INSULAR AFFAIRS

In General: The Commission believes HR 1083, as amended and adopted by the House Committee on Interior and Insular Affairs, reflects a significant refinement of previous versions of the bill. A considerable amount of work has gone into the Committee-adopted bill, and it constructively addresses many of NRC's earlier concerns. We would recommend the Committee's Bill HR 1083 as a suitable vehicle for continuing the refinements needed to resolve all significant regulatory uncertainties. To assist this continuing refinement, the NRC has identified below those remaining regulatory concerns that we believe require additional legislative attention.

Taken together, these concerns could jeopardize the bill's efforts to provide sufficient assurance of a stable national system for commercial low-level waste disposal. In the NRC's view, improving this assurance would require, among other things: (a) removing further delay of a legislative clarification of disposal responsibility for certain "orphan waste" categories; (b) strengthening the state certification provisions to assure timely assumption by non-sited states of waste management responsibilities after 1992; (c) clarifying the procedures for avoiding dual regulation of mixed wastes; (d) strengthening the practicability of certain milestones for state and compact progress; (e) and providing flexibility to permit the most effective use of limited NRC resources in developing needed regulatory guidance for the states.

This last suggestion reflects the NRC's strong concern that the substantive breadth and procedural prescriptiveness of some of the tasks assigned to NRC may have the unintended effect of delaying state and compact progress if our work is not completed on the Committee-adopted bill's ambitious schedule. A related concern is that, given limited NRC resources, the NRC believes that the bill's goals can be accomplished by more efficient and less prescriptive means.

The bill assigns NRC a series of discrete tasks that must all be accomplished in a one-year period. These include three mandatory rulemakings, two potential rulemakings, a study to be issued by order, mandatory concurrence in two EPA actions, and establishment of procedures for handling disposal facility license applications. (See Table 1.) The NRC believes that some of these proposed tasks require clarification of Congressional intent, and that the schedules for the overlapping tasks are shorter than can be achieved within current resource and procedural limitations. The cumulative fiscal impact is such that

substantial unbudgeted resources would be required to meet the amended bill's deadlines.

The financial assurance requirements of Section 7, for example, may be redundant in light of the financial assurance requirements in Section 151 of the Nuclear Waste Policy Act. Section 13 may be read to require NRC to re-examine most of the issues that were subject to extensive public comment and peer review during the four-year rulemaking that preceded the December 27, 1982 publication of our 10 CFR Part 61 licensing requirements for low-level waste disposal. These provisions, which are discussed more fully below, should be clarified.

To help ensure that NRC is able to complete those actions that are most needed to implement H.R. 1083 as adopted by the Committee, we believe that at a minimum, certain schedules should be extended, particularly if rulemaking is to be required. Rulemaking involves: (a) the development and Commission approval of a proposed rule; (b) a public comment period; (c) a time for the staff to address the comments received, conduct any needed additional studies, and prepare a proposed final rulemaking; and (d) a time for Commission review and promulgation of a final rule. Our current goal for completing this process is two years. The NRC believes that some of these tasks (e.g., the development of guidance on alternative disposal methods and the development of criteria and procedures for emergency access) might be accomplished with significant savings in time and cost through means other than rulemaking, such as the publication of staff guidance documents. These recommendations are also discussed in more detail under the issue headings below.

SPECIFIC ISSUES OF CONCERN TO THE COMMISSION:

1) ASSURING A HOME FOR ALL RADIOACTIVE WASTES

Discussion: NRC has concluded that in H.R. 1083 there are certain categories of commercial radioactive wastes for which disposal is not currently assured given the uncertainties over their classification and who should be responsible for their disposal. NRC has made its concerns about these potential "orphan wastes" known to Congress in testimony before a House Committee on H.R. 1083, and has recommended that NRC responsibilities be clarified if the federal government is to be assigned additional disposal responsibilities. (See June 4, 1985, Commission comments to Udall on original version of H.R. 1083, and response to Rep. Markey Pre-hearing Questions 8a and 8c.)

Under present law, the NRC would have no jurisdiction to regulate the storage or disposal of commercial low-level waste by DOE. IF a licensee shipped the waste to a DOE site, NRC would retain jurisdiction until it arrived at the DOE site. However, if DOE picked up the material from the licensee, NRC jurisdiction would lapse when DOE took possession. Should Congress desire NRC to regulate commercial low-level waste stored or disposed of at DOE sites, legislation would be required.

NRC should also like to note that the types of commercial waste for which governmental disposal responsibilities remain unclear are: transuranic wastes, wastes in concentrations exceeding NRC regulatory limits for what is generally acceptable for near-surface disposal, and wastes from naturally-occurring and accelerator-produced radioactive materials (NARM).

Section 3(b)(2)(B)(v) of the Interior Committee bill requires DOE to prepare a comprehensive report identifying the radioactive wastes "for which neither the Federal Government nor the States have responsibility under existing Federal law." Among other things, the report is to make recommendations on the disposal of commercial transuranic wastes in concentrations above 100 nanocuries per gram, LLW in concentrations greater than 10 CFR Part 61 Class C limits, and wastes from naturally-occurring and accelerator-produced radioactive materials (NARM) and from the formerly utilized sites remedial action program (FUSRAP).

In its present form, this provision would effectively require Congress to re-open the Low-Level Radioactive Waste Policy Act in about a year after enactment of the amendments in this bill, assuming that DOE completes its study on time. While Congress considered DOE recommendations, further delay in defining governmental responsibilities could present several untoward difficulties. States with wastes that are currently not a federal responsibility would have no firm basis on which to plan for timely disposal. If DOE were to recommend that the states take this disposal responsibility, one or more of the post-1986 milestones now in H.R. 1083 might be unachievable by the time DOE's recommendation became law. For other "orphan" wastes that are now subject to NRC regulation, an indefinite period of uncertainty concerning their eventual disposal may pose problems for their continued generation.

Additionally, high-level waste is defined under Section 2(12) of the bill to have the same meaning as the definition of high-level waste in the Nuclear Waste Policy Act "as such section of NWPA is in effect on January 1, 1985." The impact of this language on NRC's current rulemaking effort to refine the definition of HLW is unclear. If the language is intended simply to preserve NRC authority to expand the definition to include other

highly radioactive materials for which the Federal Government bears responsibility for disposal, it would appear to be unnecessary. If, on the other hand, the language quoted above is intended to freeze the category of high-level wastes to include only those wastes that fit the regulatory definition as of January 1, 1985, it would effectively require Congress to pass additional legislation if NRC were later to find that other highly radioactive materials require assumption of Federal responsibility. NRC does not believe the bill should make any future legislation necessary to implement any clarification of federal or state disposal responsibilities.

NRC Recommendations: NRC continues to believe that Congress should resolve the question of orphan wastes now, so that state progress toward implementation of the LLRWPA is not impeded by uncertainties about the extent of state and federal disposal responsibilities. The NRC would also recommend that in the definition of high-level wastes under Section 2(12), the words "as such section is in effect on January 1, 1985" should be deleted.

2) NEED FOR RULEMAKING ON ALTERNATIVES TO SHALLOW LAND BURIAL

Discussion: Increasing interest in alternatives to shallow land disposal of low-level radioactive waste has raised questions as to whether NRC has the regulations in place to license such facilities. Section 11 of the Committee on Interior and Insular Affairs Bill requires the NRC promulgate guidance on alternative methods "by rule" within 12 months of enactment. The Commission believes that a mandatory rulemaking could delay implementation of the Low-Level Radioactive Policy Act. States and compacts (especially those required by state law to pursue alternatives to shallow land burial) could conclude that they cannot proceed with the development of new disposal facilities until the rulemaking was completed. This could threaten the viability of the bill's milestones for state and compact progress.

The NRC has not yet concluded that additional regulations are needed to license alternative methods. The performance objectives, technical criteria, and data-gathering, recordkeeping, financial assurance, and procedural and institutional requirements already in our regulations would apply to all near-surface disposal technologies, including alternatives to shallow-land burial.

Guidance will be developed on a continuing basis. It is very unclear at this time what specific type or types of disposal alternatives the states

and compacts are likely to develop. The Staff is currently evaluating the applicability of the 10 CFR 61 technical requirements to five alternative disposal concepts. These include earthmounded concrete bunkers, mined cavities, augured holes and above-ground and below-ground vaults. We plan to develop detailed guidance and licensing criteria for those alternatives which appear capable of meeting the site performance objectives contained in Part 61, and for which a commitment to pursue site development is demonstrated. We will continue to work closely with states, compact organizations, and private entities to determine specific technical guidance needs. The Commission believes that the above described approach will meet specific state and compact needs on a more timely and efficient basis than would be feasible under a rulemaking for alternative methods of waste disposal.

We should also note that the 12-month requirement for completion of the rulemaking is half the time NRC has indicated is its current regulatory goal for completion of rulemakings. To meet the H.R. 1083 deadline, substantial unbudgeted resources would be required.

NRC Recommendation: The words "by rule" should be replaced with "technical guidance."

3) ALTERNATIVES TO LOSS OF DISPOSAL SITE ACCESS, MISSED MILESTONE CERTIFICATION

Discussion: The Interior Subcommittee-adopted version of H.R. 1083 provides that if a non-sited state or region misses any one of the 1986, 1988, or 1990 milestones toward new disposal facility development, its waste producers would lose access to operating disposal sites. Noting the potential impacts on public health and safety from a loss of access, NRC recommended that the bill provide alternative penalties. The NRC suggested that Congress consider requiring the Governor of each such state to make a certification, backed by binding contracts with waste generators, that the state will take title to the waste and assume responsibility for its management after the deadline in the bill for final loss of mandated access to currently available disposal capacity. This responsibility would continue until additional disposal capacity became available in the affected state or compact region.

Section 5(d)(1)(C)(ii) of the Committee-adopted bill provides that if a state or compact has not submitted a complete license application by January 1, 1990, the Governor of such state, or the Governor of each state in the affected compact region, shall certify in writing to the NRC that it will provide for the storage, disposal, or management of the waste

generated within the state and requiring disposal after December 31, 1992. The certification must also include a description of the actions that will be taken to assure that such capacity exists.

While this provision does provide a means of avoiding loss of access, the NRC is concerned that it introduces further uncertainties. It is unclear whether NRC is to determine that the state's certification is sufficient to assure that the necessary capacity will be in place on time. It is also unclear what is intended to happen if a state's certification appears to be deficient.

NRC Recommendations: We believe that the sufficiency of a non-sited state's certification would best be assured if the bill required it to be issued to generators and owners of the waste, as well as to the sited state with the affected disposal capacity instead of the Commission; and if the certification were backed by enforceable instruments to assure the sited state that the certifying state would carry out its commitments on time. Under this approach, certification would be provided to the entity that requires the assurance to keep its facility available, and the assurance itself would be enforceable by the parties most directly interested in the certifying state's timely and effective action -- the generators and owners of waste within that state. These entities would be in a position to seek legal remedy if the bill required that the certification be backed by binding contracts, or some other enforceable mechanism, between the certifying state and the waste generators or owners. Ideally, this mechanism should be fully in place by a reasonable date, and should involve a fee or other means to cover necessary and reasonable state management costs.

We also believe the certification should be accompanied by plans that identify interim deadlines for the selection of sites and submission of complete applications to provide enough time for the licensing, construction, and operation of any state storage or treatment facilities needed to implement the intent of the certification. It may also be useful to provide for inclusion of such plans in the legal commitment to the waste generators and owners. Clearer statutory requirements may help minimize issues for litigation.

Finally, to avoid a proliferation of disposal sites, the certification language should make clear that if the affected state is a compact member, disposal of the wastes requiring disposal after December 31, 1992 is to take place at the appropriate regional facility.

4. ALLOTTED TIME BETWEEN DEVELOPMENT OF SITING PLAN AND SUBMISSION OF COMPLETE LICENSE APPLICATION

Discussion: In comments on the Subcommittee-adopted version of H.R. 1083, NRC staff noted that the 1988 milestone for identification of the host state for a regional disposal facility and development of a siting plan may not represent sufficient progress to assure that the 1990 milestone for a complete disposal site application would be met. The comments noted that potential siting areas would probably have to be identified no later than January 1, 1988, and alternative sites by July 1, 1988, in order to meet the January 1, 1990 milestone.

Section 5(d)(1)(B)(i) of the bill adopted by the full Committee provides that by January 1, 1988, the non-sited compact region must have a siting plan with detailed procedures and schedules for establishing a facility location and preparing a license application -- a clear improvement over the Subcommittee version. The Committee bill does not, however, adopt the NRC staff suggestion that the 1988 milestone require identification of potential siting areas and alternative sites.

NRC Recommendation: We continue to believe that the identification of potential siting areas by 1988 will be needed to meet the 1990 milestone.

5. ISSUE: EMERGENCY ACCESS TO CURRENTLY OPERATING DISPOSAL FACILITIES

Discussion: We are concerned that Section 6(k) provides only six months after enactment for NRC to promulgate, "by rule," criteria and procedures for the granting of emergency access. As the Commission noted in its response to the Subcommittee amendment allowing 12 months for NRC rulemaking on alternatives to shallow land burial, the agency's current goal for completion of a rulemaking is two years. Criteria may be needed before two years, however, since the first milestone is in 1986.

The language in Section 6 is also unclear regarding the period of time during which NRC may grant emergency access to operating disposal sites. This section could be read to apply only during the transition and licensing periods. The NRC believes there may be occasions after that date when emergency access may be required to protect public health and safety.

NRC Recommendation: We would suggest deleting the words "by rule" to afford NRC the flexibility to establish these criteria through other means. We would also suggest that the criteria be required to be in place no later than the first date at which loss of access could occur.

Additionally, the NRC believes Section 6 should be expanded to clarify that the NRC authority to grant emergency access does not terminate at the close of the transition and licensing periods.

6. NEED FOR ADDITIONAL ASSURANCE OF FINANCIAL RESPONSIBILITY

Discussion: Section 7 of the Committee bill requires NRC and each Agreement State to ensure that any facility licensed by them is covered by financial assurance for compliance with all requirements for operating a "safe and environmentally sound" facility, including any requirement for site closure and decommissioning or corrective action "prior to the expected time of license termination due to economic or health and safety reasons." NRC is uncertain whether or how this provision would add to the financial assurances already required under existing law.

Section 151(a) of the Nuclear Waste Policy Act requires NRC to establish requirements by rule for financial arrangements to permit completion of all NRC requirements for the decontamination, decommissioning, site closure, and reclamation of LLW disposal facilities. NRC is also required under this subsection to ensure that the disposal site licensee has made available the needed financial arrangements to ensure that any necessary monitoring or long-term maintenance will be carried out.

Section 7 of the Committee bill may have the unintended effect of promoting the regulatory uncertainties it was designed to resolve. It does not mandate actions that are clearly outside existing NRC authority. It would, however, provide additional grounds for differing interpretations of the financial assurances that would be required. The language addressing the financial requirements of "operating" a disposal facility, for example, could be construed to involve NRC in the oversight of the licensee's day-to-day financial position -- an economic regulatory responsibility NRC is not currently equipped to fulfill.

NRC Recommendation: Unless this Section can be revised to clarify the legislative intent and the new authority needed to carry it out, the staff recommends that it be deleted.

7. RECLASSIFICATION OF CERTAIN LLW

Discussion: Under Section 12 of the Committee bill, NRC is to promulgate standards to identify waste that need not be disposed of in a licensed LLW disposal facility due to its low radioactive material content. This is

essentially a requirement to establish de minimis dose standards for LLW waste disposal.

The NRC has not determined that the establishment of de minimis dose standards for LLW disposal is necessarily the most practical way to identify those radioactive wastes that need not be disposed of in a LLW disposal facility. In addition to specifying some level of dose below which no further effort is needed to achieve ALARA, the most effective mechanism for managing various waste streams will have to be identified. The NRC believes that it will be necessary to assess the individual and collective dose from uncontrolled release of a variety of waste categories and balance the results of those analyses against the dose and costs attendant to controlled disposal under the current interpretation of ALARA. To accomplish this via rulemaking as is currently required by the bill would not be possible within the time allotted.

NRC Recommendations: As a substitute, the NRC would recommend that legislative history reflect Congressional intent that NRC expand its current rules to permit additional very low-level waste streams to be treated without involving a de minimis standard consistent with adequate protection of public health and safety. This legislative history should also note that Congress expects the nuclear industry to supply the data on waste streams needed for NRC to expand the category of wastes below our regulatory concern.

If a provision in the bill itself is needed, NRC would recommend the following:

> "Not later than December 31, 1986, the NRC shall identify candidate types of waste, in addition to those already provided by rule, that need not be disposed of in a licensed radioactive waste disposal facility due to their low hazard. Such candidate identification shall take into account appropriate radiological protection criteria to assure adequate protection of the public health and safety, as well as radiation exposure and costs associated with alternative methods of disposal."

8. NRC STUDY OF LLW WITH HAZARDOUS LIFE EXCEEDING INSTITUTIONAL CONTROLS

Discussion: Section 13 of the Committee bill requires NRC to identify within six months of enactment those low-level wastes for which the "hazardous life" exceeds the 100-year institutional control period under 10 CFR Part 61.59. Within twelve months after identifying these wastes,

NRC is to complete a rulemaking to "promulgate or revise standards, and specify methods for" the disposal of such wastes if it determines such standards and methods to be "necessary to minimize the long-term threat to public health and safety."

The "hazardous life" of a waste is a complex concept involving a series of interrelated technical considerations, including the waste's chemistry, physical form, likely pathway to human exposure, and the half-life and concentration of its constituent radionuclides. Any simplified definition based solely on half-life, for example, does not account for other considerations such as radionuclide concentration and waste form. NRC's 10 CFR Part 61 licensing rule for the land disposal of low-level wastes was established with these considerations in mind. One of its basic principles is that the disposal facility design, and the waste classification system with its concentration limits and waste form and intruder barrier requirements, must be sufficient to protect public health under the assumption that institutional controls would be lost after 100 years following closure of the facility and transfer of the license from the facility operator to the state or federal government.

Although the staff is currently conducting additional analyses to characterize reactor decommissioning wastes and wastes in concentrations exceeding our 10 CFR Part 61 limits for routine near-surface disposal, the hazards and regulatory requirements for other low-level wastes have already undergone extensive review as a part of the NRC rulemaking for land disposal of wastes under 10 CFR Part 61.

For those wastes that do require further examination, we do not believe that the study as proposed under Section 13 is a prerequisite for state and compact decisions on disposal facility siting and development. We expect that all the investigations to identify and establish requirements for the non-radiological hazards of mixed wastes would take place under Section 15. Wastes exceeding Class C limits would not be a state responsibility under the Interior Committee version of H.R. 1083, and comprehensive detailed information on reactor decommissioning wastes can not realistically be compiled within the six months provided.

As presently drafted, Section 13 would leave uncertain the requirements for disposal of low-level wastes whose "hazardous lifetimes" exceeded the period of institutional control. These requirements would depend on the outcome of an NRC study and subsequent rulemaking. While the bill allots six months and one year, respectively, for the study and rulemaking, NRC estimates that a total of three years would be needed for these activities (a year for the study and two years for the rulemaking.) Since states and

disposal site developers would be unable to proceed with facility siting and design in the absence of firm regulatory criteria, Section 13 could have a major impact on the schedules in the rest of the bill.

NRC Recommendations: NRC recommends that Section 13 either be deleted or clarified to focus NRC studies on those wastes that were not examined during the Commission's 10 CFR Part 61 rulemaking -- that is, low-level wastes in concentrations greater than Class C limits.

If Congress decides not to delete Section 13 or refocus it as suggested, we recommend that the schedules in Section 5 of the Committee-adopted bill be adjusted to allow another 18 months for completion of the study and rulemaking.

9. DELEGATION OF RCRA PERMIT AUTHORITY FOR MIXED WASTES

Discussion: Section 15(c) directs the Administrator of the U.S. Environmental Protection Agency (EPA) to enter into an agreement with the NRC to delegate authority to NRC to issue permits for management of mixed wastes. To avoid continuing regulatory uncertainties, three clarifications of Congressional intent are needed concerning the role of the States in regulating mixed-wastes.

First, the bill does not clearly specify that the delegation of authority for mixed wastes from EPA to NRC would supersede any prior delegations of authority by EPA to States to issue permits as they would apply to NRC-licensed disposal facilities. Without such clarification, Section 15 may be construed to provide that NRC is to be delegated authority in addition to such States, and NRC-licensed facilities within these states would be subject to dual NRC-state agency regulation under RCRA.

Second, the bill is silent on the intent of Congress regarding redelegation of RCRA authority for mixed-waste regulation from NRC to Agreement State agencies through the EPA-NRC agreement under Section 15. It would be appropriate to clarify that Agreement State agencies authorized to regulate low-level waste disposal facilities under Section 274b. of the Atomic Energy Act would also be authorized to issue RCRA permits for mixed waste disposal at Agreement State-licensed disposal facilities pursuant to the EPA-NRC agreement under Section 15. It should also be understood that this authority would be carried out under NRC oversight pursuant to its agreement with EPA.

Lastly, no provision is made for mixed waste which the NRC, under Section 12 of the bill, identifies as below regulatory concern based

solely on its low radiological hazard. Clarification should be made on this point to avoid the creation of an "orphan" hazardous waste category.

NRC Recommendations: We believe that the first and third of the above clarifications can be made through appropriate Committee Report language. The second, involving EPA delegation of RCRA authority to Agreement State agencies through NRC, may require an amendment to Section 15 of the House Interior Committee bill.

10. REGULATORY CONCERNS WITH COMPACTS NOT ADDRESSED BY H.R. 1083

Presented below are three regulatory concerns with compacts which have not been addressed in H.R. 1083:

a. Preservation of Agreement State Role

Discussion: Section 4(b)(4) of H.R. 1083 provides language preserving federal regulatory authority. The section is silent on preservation of authority of NRC Agreement States under Section 274 b of the Atomic Energy Act.

NRC Recommendation: We believe the following language should be added to the final sentence of Section 4(b)(4) which would ensure the preservation of Agreement State authority: "..., or any Agreement State under Section 274b of the Atomic Energy Act, as amended (42 U.S.C. 2021)."

b. Federal Disposal Facilities

Discussion: Section 4(b)(2) clarifies that disposal facilities operated exclusively for Federal Government low-level wastes are not subject to compact actions. In discussing the waste affected by this section, waste "produced" by the Federal Government is referenced. In certain special instances, federal facilities have accepted unique waste streams for disposal from NRC or Agreement State licensees. We believe this section may unintentionally restrict such disposal practices, which may be required to protect public health and safety.

NRC Recommendation: The NRC recommends that the word "produced" be replaced by the word "owned" to provide necessary flexibility to protect public health and safety.

c. Management Versus Disposal

Discussion: Regional programs provided for in various compacts go beyond "disposal" into most aspects of low-level radioactive waste management (e.g., storage, treatment and transportation). Included are import and export restrictions that go beyond "disposal" to encompass, for example, storage and treatment. The Low-Level Radioactive Waste Policy Act (Public Law 96-573) does not confer additional authority to the States with respect to generation, transportation, storage, treatment, or any other activity in the waste management system that does not constitute "disposal". Section 4 of H. R. 1083, which discusses the purpose for the formation of regional compacts, has language similar to Public Law 96-573, and therefore does not alter the intent of Congress, which is to form compacts for "disposal" only. Both Public Law 96-573 and H. R. 1083 acknowledge that the responsibilities of the States for the disposal of low-level radioactive waste can be most safely and efficiently managed on a regional basis. However, both are silent on the extent to which the States have interpreted their mandate to provide for "disposal."

NRC has discussed the issue of "management" versus "disposal" in previous Congressional testimony and in comments to the States on their compacts. The States believe that they must have provisions in their compacts to limit the number of facilities of all kinds, determine their size, and assure their economic viability. Consequently, the States believe that they must manage for economic, institutional, and equity purposes the entire waste system to be fully responsive to Public Law 96-573, rather than only provide disposal capacity.

While the NRC recognizes a need on the part of the States to be able to exercise some control over the waste from generation to disposal in order to ensure the success of the States' disposal undertaking, the exercise of wide ranging management authority by the States poses the potential for serious conflict with NRC policies regarding short and long term storage and handling of waste by generators, among others. These management provisions could also place undue burden on interstate commerce.

NRC Recommendation: The NRC believes that the Congress should address this issue in a manner that recognizes the needs of the States to ensure the success of the States' performance of their legal obligation to provide disposal capacity, but, at the same time, reaffirms that Federal health and safety policies, however expressed, relating to the generation, transportation, handling, storage and disposal of waste take precedence over the economic, institutional,

or equitable state management concerns. The States should be sparing in their exercise of management authority, using it only when necessary and then only in a manner consonant with overriding health and safety policies relating to "disposal". Additional language could be inserted into section 4(b) of H.R. 1083 for this purpose.

STATEMENT OF

SHELDON MEYERS

ACTING DIRECTOR, OFFICE OF RADIATION PROGRAMS

U.S. ENVIRONMENTAL PROTECTION AGENCY

BEFORE THE

SUBCOMMITTEE ON ENERGY RESEARCH AND DEVELOPMENT

COMMITTEE ON ENERGY AND NATURAL RESOURCES

AND SUBCOMMITTEE ON NUCLEAR REGULATION

COMMITTEE ON ENVIRONMENT AND

PUBLIC WORKS

UNITED STATES SENATE

OCTOBER 8, 1985

Mr. Chairman, my name is Sheldon Meyers and since August 1984 I have been Acting Director of the Office of Radiation Programs in the U.S. Environmental Protection Agency. Lee Thomas, Administrator of EPA, appreciates the invitation to appear today to testify on your pending bills, the Low-Level Radioactive Waste Policy Amendments of 1985, S.1517 and S.1578 and has asked that I present the Agency's testimony on this subject.

As you know, Mr. Chairman, the U.S. Environmental Protection Agency does not have a direct role under the Low-Level Radioactive Waste Policy Act of 1980, in either the negotiation, development or approval of regional interstate compacts. At EPA, we have, of course, followed the development of the compacts with great interest. We know that the States in several regions have made extensive progress; elsewhere, much work remains to be done. The bills would provide to the Department of Energy (DOE) continued authority to assist the States (those that are members of compacts and those that are not yet members of compacts) in fulfilling their responsibilities under the Low-Level Radioactive Waste Policy Act of 1980. Until such time as all States are part of a compact or have accepted sole responsibility for the disposal of low-level radioactive waste within their State, it may well be necessary for this type of technical assistance to be provided so that all States will be able to comply with their responsibility in the disposal of low-level radioactive waste.

The Senate bills also address DOE reporting requirements and limitations, surcharges, nondiscrimination and reciprocity of users at the current regional disposal facilities at Barnwell, South Carolina, Hanford, Washington, and Beatty, Nevada. While we support the concept of the interstate compacts and the work required to institutionalize these compacts, we defer to the agencies more directly involved under the statute for specific comments regarding these provisions. We note that the Senate bills call on EPA to consult and cooperate with compact commissions and States in carrying out the Act's provisions and we will certainly continue to do that as we have in the past. We have been working particularly closely with the Conference of Radiation Control Program Directors, a national organization which represents State radiation health professionals in this area.

EPA has a role, but only a limited one, in low level radioactive waste management. EPA has the authority to establish generally applicable environmental standards to protect public health and the general environment from adverse effects from the land disposal of low-level radioactive wastes. We published an Advance Notice of Proposed Rulemaking expressing our intention to do so in August of 1983.

EPA had originally expected to publish a proposed low-level radioactive waste standard early in 1985, with promulgation of our final standard a year later, in 1986. That schedule unfortunately has been delayed by about a year. There have been two principal causes for this postponement.

First, in response to a specific request from the States and from the Conference of Radiation Control Program Directors, EPA has expanded the coverage of the low level waste standard to include wastes from naturally-occurring and accelerator-produced radioactive materials (NARM). The States were especially concerned about the treatment of NARM wastes and what they saw as a problem because these wastes were not covered by the rules governing the handling of radioactive wastes. We chose to include NARM wastes within the coverage of our standard in order to avoid this problem. This will eliminate the guesswork, the diversity of standards and broad differences we now find among the States in handling NARM wastes. In some cases it will allow the States to provide needed control where none exists today.

Also, in connection with its review last year of EPA's proposed standard for radionuclides under the Clean Air Act, EPA's Science Advisory Board (SAB) made several suggestions for improving the format, content and presentation of our risk assessments so that future scientific reviews would be more effective and more useful to the Agency. We fully support those changes and have adopted the necessary formats for SAB's review of the low-level waste standard, which is now in progress.

A special panel of the SAB, the Radiation Advisory Committee, was appointed in February of this year. The initial request made of this group of experts by the Agency was to examine the risk analysis, which is an integral part of the low-level waste standard

development. The SAB has been reviewing the scientific basis for the low-level waste standard and we expect their final report will be presented to the Agency this Fall. We believe that this kind of review will greatly enhance the scientific credibility of the standard and any revisions to accommodate recommendations by the SAB will be well worth the delay.

It is important that EPA promulgate a final low-level waste standard, because the final standard will contain several important elements which will make it especially useful. I have mentioned NARM waste already. The standard as presently conceived will also deal with and define criteria for wastes that are "below regulatory concern" (BRC). When wastes contain very small concentrations of short-lived radioactivity, there is no reason from a public health point of view why they cannot be disposed of as we would normal trash. Space in future regional low-level waste disposal facilities will be scarce and relatively expensive. If we can safely exclude certain classes of material as "below regulatory concern," we can save valuable space in the disposal facilities as well as time, trouble and money.

We feel our standard is also important because of its expanded coverage beyond shallow land disposal, the conventional technique now in use. Our proposed standard will evaluate the costs and the risks associated with nine other technologies as possible land-disposal alternatives to shallow land disposal. These are: (1) engineered surface storage; (2) sanitary land fill; (3) improved shallow land disposal; (4) intermediate depth disposal

(over 10 meters deep); (5) deep geological disposal in a mined cavity (over 100 meters deep); (6) hydrofracturing; (7) deep-well injection; (8) the engineered mound; and finally, (9) disposal by modular concrete cannisters placed in a trench.

We believe that an examination of these alternatives will provide very useful information to those States and Compacts that are seriously considering the use of methods of disposal other than conventional shallow land disposal.

We have this comment on the Senate-proposed amendments: The Nuclear Regulatory Commission is charged with promulgating "minimal standards" for the disposal of low-level waste that is not required to be disposed of in a licensed low-level radioactive waste disposal facility. It is appropriate for the NRC to promulgate "regulations" for such wastes but "standards" related to population exposure are within the purview of the Environmental Protection Agency. In order to avoid confusion we recommend that this wording change be made.

I have with me today Mr. Mike Cook, Deputy Director of the Office of Solid Waste, to assist in answering your questions.

Mr. Chairman, that concludes my prepared remarks. We would be pleased to answer any questions the Committee may have.

XI. MINORITY VIEWS OF SENATOR BRADLEY

The Senate Energy and Natural Resources Committee reported the Low-Level Radioactive Waste Transition Bill (S. 1517) out of Committee on November 13, 1985. I have objections to several of the provisions of the bill as reported by the Energy Committee.

I am particularly concerned about the penalties for missed milestones and the associated emergency access provision. Under the bill as reported, if a State misses *any* milestone sited States may refuse to accept radioactive waste from that state. An emergency access provision is included in the bill if access is denied. This provision gives the Governor of a sited State the sole authority to grant emergency access to a non-sited State, subject to whatever terms the sited State Governor requires.

I fully support the need for meaningful penalties and incentives to insure that States meet milestones. I object to placing the decision to grant emergency access and the total control over terms and conditions of that access in the hands of the sited States' Governors. If a State refuses to take responsibility for providing for the disposal of low-level waste generated within its borders the closure of all access to other states is in order. But in the bill as reported from Committee, a State may be making a good faith effort to meet the milestones set forth in this legislation, and find itself impeded by circumstances beyond its control, such as environmental emergencies or legal roadblocks. In such a case, to leave the decision and conditions of emergency access to any disposal site to the arbitrary process present in the legislation is not responsible.

I hope when the full Senate considers S. 1517 we will develop a better emergency procedure to ensure that an independent third party decides if a good faith effort is being made to meet milestones. In addition, if emergency access is deemed appropriate the legislation should set an upper limit on the surcharge, not leave it open-ended.

These issues are very important to States like New Jersey, which have entered into compacts, as well as States which have not.

BILL BRADLEY.

XII. Changes in Existing Law

In compliance with paragraph 12 of Rule XXVI of the Standing Rules of the Senate, the Committee notes the following changes in existing law made by the Low-Level Radioactive Waste Policy Act Amendments of 1985, as reported. (Existing law proposed to be omitted is enclosed in black brackets, new matter is printed in italic, and existing law in which no change is proposed is shown in roman.)

Low-Level Radioactive Waste Policy Act

AN ACT To set forth a Federal policy for the disposal of low-level radioactive wastes, and for other purposes

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

[SHORT TITLE

[SECTION 1. This Act may be cited as the "Low-Level Radioactive Waste Policy Act."

[DEFINITIONS

[SEC. 2. As used in this Act—

[(1) The term "disposal" means the isolation of low-level radioactive waste pursuant to requirements established by the Nuclear Regulatory Commission under applicable laws.

[(2) The term "low-level radioactive waste" means radioactive waste not classified as high-level radioactive waste, transuranic waste, spent nuclear fuel, or byproduct material as defined in section 11 e. (2) of the Atomic Energy Act of 1954.

[(3) The term "State" means any State of the United States, the District of Columbia, and, subject to the provisions of Public Law 96-205, the Commonwealth of Puerto Rico, the Virgin Islands, Guam, the Northern Mariana Islands, the Trust Territory of the Pacific Islands, and any other territory or possession of the United States.

[(4) For purposes of this Act the term "atomic energy defense activities of the Secretary" includes those activities and facilities of the Department of Energy carrying out the function of—

[(i) Naval reactors development and propulsion,

[(ii) weapons activities, verification and control technology,

[(iii) defense materials production,

[(iv) inertial confinement fusion,

[(v) defense waste management, and

[(vi) defense nuclear materials security and safeguards

(all as included in the Department of Energy appropria-

tions account in any fiscal year for atomic energy defense activities).

[GENERAL PROVISIONS

[SEC. 3. (a) Compacts established under this Act or actions taken under such compacts shall not be applicable to the transportation, management, or disposal of low-level radioactive waste from atomic energy defense activities of the Secretary or Federal research and development activities.

[(b) Any facility established or operated exclusively for the disposal of low-level radioactive waste produced by atomic energy defense activities of the Secretary or Federal research and development activities shall not be subject to compacts established under this Act or actions taken under such compacts.

[LOW-LEVEL RADIOACTIVE WASTE DISPOSAL

[SEC. 4. (a)(1) It is the policy of the Federal Government that—

[(A) each State is responsible for providing for the availability of capacity either within or outside the State for the disposal of low-level radioactive waste generated within its borders except for waste generated as a result of defense activities of the Secretary or Federal research and development activities; and

[(B) low-level radioactive waste can be most safely and efficienctly managed on a regional basis.

[(2)(A) To carry out the policy set forth in paragraph (1), the States may enter into such compacts as may be necessary to provide for the establishment and operation of regional disposal facilities for low-level radioactive waste.

[(B) A compact entered into under subparagraph (A) shall not take effect until the Congress has by law consented to the compact. Each such compact shall provide that every 5 years after the compact has taken effect the Congress may by law withdraw its consent. After January 1, 1986, any such compact may restrict the use of the regional disposal facilities under the compact to the disposal of low-level radioactive waste generated within the region.

[(b)(1) In order to assist the States in carrying out the policy set forth in subsection (a)(1), the Secretary shall prepare and submit to Congress and to each of the States within 120 days after the date of the enactment of this Act a report which—

[(A) defines the disposal capacity needed for present and future low-level radioactive waste on a regional basis;

[(B) defines the status of all commercial low-level radioactive waste disposal sites and includes an evaluation of the license status of each such site, the state of operation of each site, including operating history, and analysis of the adequacy of disposal technology employed at each site to contain low-level radioactive wastes for their hazardous lifetimes, and such recommendations as the Secretary considers appropriate to assure protection of the public health and safety from wastes transported to such sites;

[(C) evaluates the transportation requirements on a regional basis and in comparison with performance of present transpor-

tation practices for the shipment of low-level radioactive wastes, including an inventory of types and quantities of low-level wastes, and evaluation of shipment requirements for each type of waste and an evaluation of the ability of generators, shippers, and carriers to meet such requirements; and

[(D) evaluates the capability of the low-level radioactive waste disposal facilities owned and operated by the Department of Energy to provide interim storage for commercially generated low-level waste and estimates the costs associated with such interim storage.

[(2) In carrying out this subsection, the Secretary shall consult with the Governors of the States, the Nuclear Regulatory Commission, the Environmental Protection Agency, the United States Geological Survey, and the Secretary of Transportation, and such other agencies and departments as he finds appropriate.]

SHORT TITLE

SECTION 1. That this Act may be cited as the "Low-Level Radioactive Waste Policy Act Amendments of 1985".

AMENDMENT TO THE LOW-LEVEL RADIOACTIVE WASTE POLICY ACT

SEC. 2. The Low-Level Radioactive Waste Policy Act (42 U.S.C. 2021b et seq.) is amended to read as follows:

SHORT TITLE

SECTION 1. That this Act may be cited as the "Low-Level Radioactive Waste Policy Act".

DEFINTIONS

SEC. 2. For purposes of this Act:

(1) AGREEMENT STATE.—The term "Agreement State" means a State that—

(A) has entered into an agreement with the Nuclear Regulatory Commission under section 274b. of the Atomic Energy Act of 1954, as amended (42 U.S.C. 2021); and

(B) has authority to regulate the disposal of low-level radioactive waste under such agreement.

(2) ALLOCATION.—The term "allocation" means the assignment of a specific amount of low-level radioactive waste disposal capacity to a commercial nuclear power reactor for which access is required to be provided by sited States subject to the conditions specified under this Act.

(3) COMMERCIAL NUCLEAR POWER REACTOR.—The term "commercial nuclear power reactor" means any unit of a civilian nuclear powerplant that—

(A) is required to be licensed under section 103 or 104b of the Atomic Energy Act of 1954 (42 U.S.C. 2133 or 2134b) and is a pressurized-water reactor (hereinafter referred to as a PWR) or a boiling-water reactor (hereinafter referred to as a BWR); and

(B) produces or has produced power for purposes of sale.

(4) DISPOSAL.—The term "disposal" means the permanent isolation of low-level radioactive waste under requirements established by the Nuclear Regulatory Commission or an Agreement State under applicable law.

(5) HOST STATE.—The term "host State" means any State identified, in accordance with an applicable compact, for siting a non-Federal regional low-level radioactive waste disposal facility that will be developed after January 1, 1986, and in operation before January 1, 1993.

(6) LOW-LEVEL RADIOACTIVE WASTE.—The term "low-level radioactive waste" means radioactive waste that—

(A) is not classified as high-level radioactive waste or spent nuclear fuel (as defined in section 2 of the Nuclear Waste Policy Act (42 U.S.C. 10101) or byproduct material (as defined in section 11e(2). of the Atomic Energy Act of 1954 (42 U.S.C. 2014(e)(2) as in effect on January 1, 1985); or

(B) if not subject to the provisions of the Atomic Energy Act of 1954, as amended, is generated after the date of enactment of the Low-Level Radioactive Waste Policy Act Amendments of 1985.

(7) SITED STATE OR SITED COMPACT REGION.—The terms "sited State" or "sited compact region" mean any such State or compact region in which a licensed non-Federal low-level radioactive waste disposal facility exists and was accepting wastes in 1985.

(8) STATE.—The term "State" means any State of the United States, the District of Columbia, and the Commonwealth of Puerto Rico.

RESPONSIBILITIES FOR DISPOSAL OF LOW-LEVEL RADIOACTIVE WASTE

SEC. 3. (a) STATE RESPONSIBILITIES.—Each State shall be responsible for providing, either by itself or in cooperation with other States, for the disposal of low-level radioactive waste generated within the State that—

(1) consists of or contains class A, B, or C radioactive waste as defined by section 61.55 of title 10, Code of Federal Regulations, as in effect on December 27, 1982; or

(2) contains concentrations of radionuclides that

(A) are not source, byproduct, or special nuclear material as defined in section 11 of the Atomic Energy Act of 1954, as amended, and

(B) have radioactivity levels determined by the Commission to be no greater than low-level radioactive waste classified as "Class C" as defined by section 61.55 of title 10, Code of Federal Regulations, as in effect on December 27, 1982; and

(3) is owned or generated by an entity other than an entity identified in subparagraphs (1)(A), (B), and (C) of subsection (b); or

(4) is not radioactive waste identified under the Formerly Utilized Sites Remedial Action Program, except that no State shall be responsible for providing disposal of material consisting of or containing radioactive waste that is not required under Nuclear Regulatory Commission regulations to be disposed of in a li-

censed low-level radioactive waste disposal facility due to its low radiation content.

(b) FEDERAL RESPONSIBILITIES.—

(1) LOW-LEVEL RADIOACTIVE WASTE DISPOSAL.—The Federal Government shall be responsible for providing for the disposal of—

(A) low-level radioactive waste owned or generated by the Department of Energy;

(B) low-level radioactive waste owned or generated by the United States Navy as a result of the decommissioning of vessels;

(C) low-level radioactive waste owned or generated by the Federal Government as a result of any research, development, testing, or production of any atomic weapon; and

(D) any other low-level radioactive waste not covered by subsection (a).

(2) REPORT.—Not later than the expiration of the 12-month period following the date of the enactment of the Low-Level Radioactive Waste Policy Act Amendments of 1985, the Secretary of Energy shall submit to the Congress a comprehensive report setting forth plans of the Secretary to ensure the safe disposal of the low-level radioactive waste for which responsibility for disposal rests with the Federal Government under subparagraph (1)(D). Such report shall include—

(A) an identification of the low-level radioactive waste for which the Federal Government has responsibility under subparagraph (1)(D);

(B) an identification of Federal and non-Federal options for disposal of such radioactive waste;

(C) a description of the actions proposed to ensure the safe disposal of such radioactive waste;

(D) a description of the projected costs of taking such actions; and

(E) the Secretary's recommendations, including any statutory authority required, for disposal of such waste.

(3) DISPOSAL OF CERTAIN FEDERAL WASTE.—The Secretary may not transport to a Federal low-level radioactive waste disposal facility any low-level radioactive waste that—

(A) becomes a Federal responsibility for the first time pursuant to the Low-Level Radioactive Waste Policy Act Amendments of 1985, and

(B) is generated by a source from which low-level radioactive waste has not been placed in a Federal low-level radioactive waste disposal facility prior to the date of enactment of the Low-Level Radioactive Waste Policy Act Amendments of 1985,

until ninety days after the report prepared pursuant to paragraph (2) has been submitted to the Congress.

(4) NUCLEAR REGULATORY COMMISSION RULEMAKING.—Within 12 months after the date of the enactment of the Low-Level Radioactive Waste Policy Act Amendments of 1985, the Commission shall initiate a rulemaking proceeding for the purpose of identifying any specific low-level radioactive waste stream that should no longer be required to be disposed of in licensed low-

level radioactive waste disposal facilities due to its low radiative content.

REGIONAL AND STATE DISPOSAL OF LOW-LEVEL RADIOACTIVE WASTE

SEC. 4. (a) IN GENERAL.—

(1) FEDERAL POLICY.—It is the policy of the Federal Government that the responsibilities of the States under this section for the disposal of low-level radioactive waste can be most safely and efficiently managed on a regional basis.

(2) INTERSTATE COMPACTS.—To carry out the policy set forth in paragraph (1), the States may enter into such compacts as may be necessary to provide for the establishment and operation of regional disposal facilities for low-level radioactive waste.

(b) APPLICABILITY TO FEDERAL ACTIVITIES.—

(1) IN GENERAL.—

(A) DEPARTMENT OF ENERGY AND UNITED STATES NAVY WASTE.—Except as provided in subparagraph (B), no compact or action taken under a compact shall be applicable to the transportation, management, or disposal of low-level radioactive waste owned or generated by the Department of Energy or generated by the decommissioning of vessels of the United States Navy.

(B) FEDERAL LOW-LEVEL RADIOACTIVE WASTE DISPOSED OF AT NON-FEDERAL FACILITIES.—Low-level radioactive waste owned or generated by the Federal Government that is disposed of at a non-Federal regional disposal facility or non-Federal disposal facility within a State that is not a member of a compact shall be subject to the same conditions, regulations, requirements, fees, taxes, and surcharges imposed by the compact commission, or by the State in which such facility is located, in the same manner and to the same extent as any low-level radioactive waste not owned or generated by the Federal Government.

(2) FEDERAL LOW-LEVEL RADIOACTIVE WASTE DISPOSAL FACILITIES.—Any low-level radioactive waste disposal facility established or operated exclusively for the disposal of low-level radioactive waste that is the responsibility of the Federal Government under section 3(b)(1) shall not be subject to any compact or any action taken under a compact.

(3) EFFECT ON AUTHORITY OF COMPACT COMMISSIONS AND STATES.—Nothing contained in this Act or any compact confers any new authority on any compact commission or State—

(A) to regulate for health and safety the generation, treatment, storage, packaging, transportation, and disposal of low-level radioactive waste in a manner incompatible with the regulations of the Nuclear Regulatory Commission or the Department of Transportation;

(B) to regulate health, safety, or environmental hazards from byproduct material, source material or special nuclear material (as such terms are defined in sections 11(e), (z), and (aa), respectively, of the Atomic Energy Act of 1954 (42 U.S.C. 2014) as in effect on January 1, 1985);

(C) to inspect the facilities of licensees of the Nuclear Regulatory Commission;

(D) to inspect security areas or operations at the site of the generation of any low-level radioactive waste by the Federal Government, or to inspect classified information related to such areas or operations; or

(E) to require indemnification beyond the provisions of chapter 171 or title 28, United States Code (commonly referred to as the Federal Tort Claims Act), or section 170 of the Atomic Energy Act of 1954 (42 U.S.C. 2210) (commonly referred to as the Price-Anderson Act), whichever is applicable.

(4) STATE AUTHORITY PRESERVED.—Except as expressly provided in this Act, nothing contained in this Act expands, diminishes, or otherwise affects State law.

(5) EFFECT ON FEDERAL AUTHORITY.—

(A) Except as expressly provided in this Act, nothing contained in this Act or any compact limits the applicability of any Federal law or diminishes or otherwise impairs the jurisdiction of any Federal agency.

(B) Nothing in this Act prohibits the Nuclear Regulatory Commission from establishing criteria or guidelines, under otherwise applicable law, for the licensing of low-level radioactive waste disposal facilities that use disposal methods other than shallow-land burial.

AVAILABILITY OF DISPOSAL CAPACITY

SEC. 5. (a) AGGREGATE DISPOSAL CAPACITY.—During the seven-year period beginning January 1, 1986, and ending December 31, 1992—

(1) BARNWELL, SOUTH CAROLINA.—The State of South Carolina, in accordance with the provisions of its compact, may limit the amount of low-level radioactive waste accepted for disposal at the regional disposal facility located at Barnwell, South Carolina—

(A) during the seven-year period referred to in this subsection to 8,400,000 cubic feet; and

(B) in any one calendar year, to 1,200,000 cubic feet.

The restriction under subparagraph (B) may apply until the facilities referred to in paragraphs (2) and (3) have reached their calendar-year limitation as specified in paragraphs (2)(B) and (3)(B).

(2) RICHLAND, WASHINGTON.—The State of Washington, in accordance with the provisions of its compact, may limit the amount of low-level radioactive waste accepted for disposal at the regional disposal facility located at Richland, Washington—

(A) during the seven-year period referred to in this subsection to 9,800,000 cubic feet; and

(B) in any one calendar year, to 1,400,000 cubic feet.

The restriction under subparagraph (B) may apply until the facilities referred to in paragraphs (1) and (3) have reached their calendar-year limitation as specified in paragraphs (1)(B) and (3)(B).

(3) BEATTY, NEVADA.—The State of Nevada, in accordance with the provisions of its compact, may limit the amount of

low-level radioactive waste accepted for disposal at the regional disposal facility located at Beatty, Nevada—

(A) during the seven-year period referred to in this subsection to 1,400,000 cubic feet; and

(B) in any one calendar year, to 200,000 cubic feet.

The restriction under subparagraph (B) may apply until the facilities referred to in paragraphs (1) and (2) have reached their calendar-year limitation as specified in paragraphs (1)(B) and (2)(B).

(4) In the event that in any one year all three disposal facilities referenced in this subsection reach or exceed their calendar-year limitations as specified in subparagraphs (a)(1)(B), (2)(B), and (3)(B), such limitations shall be increased by successive increments of 10 percent at all three facilities for that calendar year.

(5) Under this subsection any State may grant priority of access to its disposal facility to low-level radioactive waste generated within the compact region of the compact of which such State is a member.

(b) RESTRICTIONS.—

(1) No State or compact region in which a facility referred to in this section is located may limit the amount of disposal capacity at such facility except in accordance with this section or in accordance with any valid agreement under section 274b. of the Atomic Energy Act of 1954, as amended.

(2) No State referred to in subsection (a) shall be obligated to accept low-level radioactive waste from any source in the event that the facility located in such State ceases operation.

(c) SURCHARGES.—

(1)(A) Any State in which a regional disposal facility is located may impose a surcharge fee for disposal of low-level radioactive waste generated in a State outside of sited compact regions. Such surcharge fees shall be in addition to fees generally applicable for disposal of low-level radioactive waste in such regional disposal facility. The surcharge fee shall not exceed the amounts (in dollars per cubic foot of low-level waste) indicated in the following table:

Time period	*Surcharge*
1986–1987	*$10*
1988–1989	*$20*
1990–1992	*$40*

(B) After 1992, any surcharge fee that a State charges for waste accepted from outside of the compact region in which such State is located shall be at the discretion of the State.

(2) COLLECTION AND TRANSFER OF SURCHARGES.—

(A) The operator of a low-level waste disposal facility referred to in subsection (a) shall collect all surcharge fees upon receipt of the low-level radioactive waste subject to such fees. The operator shall periodically transfer such fees to the State in which such facility is located. Such State shall establish the schedule and procedures by which such transfers are made.

(B) 25 percent of all surcharge fees received by such State during the seven-year period referred to in subsection (a) shall

be transferred on a monthly basis to an escrow account held by the Secretary of Energy.

(C) The Secretary shall deposit all funds received in a special escrow account pending distribution pursuant to subsection (e)(2)(F). The funds so desposited shall not be the property of the United States. The Secretary shall act as trustee for such funds and shall invest them in interest-bearing United States Government Securities with the highest available yield.

(d) COMMERCIAL NUCLEAR POWER REACTOR ALLOCATIONS.—

(1) AMOUNT.—Subject to the provisions of subsections (a), (b), and (c), each commercial nuclear power reactor shall upon request receive an allocation of disposal capacity (in cubic feet) at the facilities referred to in subsection (a) during the 4-year transition period beginning January 1, 1986, and ending December 31, 1989, and during the 3-year licensing period beginning January 1, 1990, and ending December 31, 1992 in amount calculated by multiplying the appropriate number from the following table by the number of months remaining in the applicable period as determined under paragraph (2).

	4-year Transition Period		3-year Licensing Period	
Type of Reactor	Located Within Sited Region	All Other Locations	Located Within Sited Region	All Other Locations
PWR	1027	871	934	685
BWR	2300	1951	2091	1533

(2) METHOD OF CALCULATION.—For purposes of calculating the aggregate amount of disposal capacity available to a commercial nuclear power reactor under this subsection, the number of months shall be computed beginning with the first month of the applicable period, or the sixteenth month after receipt of a full power operating license, whichever occurs later.

(3) UNUSED ALLOCATIONS.—Any unused allocation under paragraph (1) received by a reactor during the transition period or the licensing period may be used at any time after such reactor receives its full power license or after the beginning of the pertinent period, whichever is later, but not in any event after December 31, 1992, or after commencement of operation of a disposal facility in the compact region or State in which such reactor is located, whichever occurs first.

(4) TRANSFERABILITY.—Any commercial nuclear power reactor in a State or compact region that is in compliance with the requirements of subsection (e) may assign any disposal capacity allocated to it under subsection (d) to any other person in any such State or compact region. Such assignment may be for valuable consideration and shall be in writing, copies of which shall be filed at the affected compact commissions and States, along with the assignor's unconditional written waiver of the disposal capacity being assigned.

(5) UNUSUAL VOLUMES.—

(A) The Secretary may, upon petition by the owner or operator of any commercial nuclear power reactor, allocate to such reactor disposal capacity in excess of the amount cal-

culated under paragraph (1) if the Secretary finds and states in writing his reasons for so finding that making additional capacity available for such reactor through this paragraph is required to permit unusual or unexpected operating, maintenance, repair or safety activities.

(B) The Secretary may not make allocations pursuant to subparagraph (A) that would result in the acceptance for disposal of more than 800,000 cubic feet of low-level radioactive waste or would result in the total of the allocations made pursuant to this subsection exceeding 11,900,000 cubic feet over the entire seven-year interim access period.

(6) LIMITATION.—During the seven-year interim access period referred to in subsection (a), the disposal facilities referred to in subsection (a) shall not be required to accept more than 11,900,000 cubic feet of low-level radioactive waste generated by commercial nuclear power reactors.

(e) REQUIREMENTS FOR NONSITED STATES.—

(1) MILESTONES.—Each compact commission or host State of a nonsited compact region and each State that does not have an operating disposal facility and is not a member of a compact for a sited compact region shall comply with the requirements of subparagraphs (A) through (C). Compliance with each milestone shall be documented by filing with the Secretary of Energy a statement of compliance together with copies of any documents requested by the Secretary—

(A) JULY 1, 1986.—By July 1, 1986, each such nonmember State shall—

(i) become a member of a compact; or

(ii) identify provisions in existing State law, or enact legislation, authorizing the construction and operation of a low-level radioactive waste disposal facility within the State by December 31, 1992.

(B) JANUARY 1, 1988.—By January 1, 1988—

(i) the compact commission for each nonsited compact region shall identify a host State within such region in which a low-level radioactive waste disposal facility will be in operation before December 31, 1992; and

(ii) each host State and each nonmember State shall have identified a site for a low-level radioactive waste disposal facility

(C) JANUARY 1, 1990.—By January 1, 1990—

(i) the operator of each disposal facility identified pursuant to subparagraph (B) shall have filed an application accepted by the Nuclear Regulatory Commission, or by the Agreement State where applicable, for a license to operate such facility; and

(ii) each host State and each nonmember State shall have established and filed with the Department of Energy a contingency plan that includes a schedule of implementation and shall identify a means for establishing alternative interim storage or disposal capabilities by January 1, 1993, in the event that the disposal facility within such State will not be licensed for oper-

ation by that date. The contingency plan shall be accompanied by a written certification by the Governor that such State will provide for the storage and disposal of any low-level radioactive waste generated within such compact region or such nonmember State and requiring disposal after December 31, 1992.

(D) Any State entering into an appropriate agreement with the compact commission of a region in which a regional disposal facility is located may, with the approval of the State in which such facility is located, be deemed to be in compliance with subparagraphs (A), (B) and (C).

(2) PENALTIES AND INCENTIVES.—

(A) JULY 1, 1986 MILESTONE.—If any nonmember State fails to comply with paragraph (1)(A), any State in which a regional disposal facility is located may elect to—

(i) refuse to accept for dispoasl all low-level radioactive waste generated in such non-member State; or

(ii) impose a penalty surcharge on all such low-level radioactive waste, until compliance is achieved.

(B) JANUARY 1, 1988 MILESTONE.—

(i) If any nonsisted compact region or any host State in a nonsited compact region or any nonmember State fails to comply with subparagraph (1)(B), any State in which a regional disposal facility is located may elect to—

(aa) refuse to accept for disposal all low-level radioactive waste generated in such region or nonmember State; or

(bb) impose a penalty surcharge on all such low-level radioactive waste,

until compliance is achieved.

(ii) When any nonsited compact region and host State comply with clause (1)(B)(ii), the host State shall be eligible for rebates in accordance with subparagraph (F); Provided: That if compliance is achieved after the January 1, 1988 milestone date, the period for the calculation of rebate payments shall begin with the date of such compliance.

(C) JANUARY 1, 1990 MILESTONE.—

(i) If any host State, any nonmember State, or any facility operator fails to comply with subparagraph (1)(C), any State in which a regional disposal facility is located may elect to—

(aa) refuse to accept for disposal all low-level radioactive waste generated in such region or nonmember State; or

(bb) impose a penalty surcharge on all such low-level radioactive waste,

until compliance is achieved.

(ii) When any host State complies with clause (1)(C)(ii), such State shall be eligible for rebates in accordance with subparagraph (F).

(D) In the event that a State imposes a penalty surcharge pursuant to subparagraph (A), (B), or (C), such surcharge

shall be collected and transferred in the manner prescribed in subsection (c)(2).

(E) REIMBURSEMENT FOR PENALTY SURCHARGE FEES.— Any generator who pays penalty surcharge fees under subparagraphs (A) through (C) or under subsection (h) shall be entitled to reimbursement of such fees from the State in which the waste was generated. In the event that a facility operator fail to comply with the requirement of subparagraph (c), the generator shall receive reimbursement of such fees from such operator.

(F) REBATES.—

(i) Any host State may receive rebate payments from the escrow account referred to in subsection (1)(C) for any period of compliance during the seven-year period referred to in subsection (a). Each such State's share of the amount in the escrow account shall represent an equal portion of the total amount in the account, but shall be reduced for any host State in proportion to such State's period of noncompliance during the period in question.

(ii) In order to administer the rebate payments to all eligible host States, each host State shall notify the Secretary in writing of the achievement of each applicable milestone.

(iii) All rebate payments to eligible host States shall be calculated every six months starting January 1, 1988, and shall be made available no later than 60 days after the end of the applicable six-month period.

(f) DENIAL OF ACCESS.—

(1) Each compact region may restrict the availability of disposal capacity for low-level radioactive waste for any waste generated outside of such compact region, beginning on January 1, 1983, or in the event that a disposal facility (other than a disposal facility referred to in subsection (a)) in the region or State in which such generator is located commences operation, whichever occurs first.

(2) After December 31, 1992, each of the States referred to in subsection (a) may restrict the availability of disposal capacity for low-level radioactive waste for any waste generated outside the compact region of the compact of which such State is a member.

(g) AVAILABILITY OF INFORMATION DURING INTERIM-ACCESS PERIOD.—

(1) The States of South Carolina, Washington, and Nevada may require information from disposal facility operators, generators, intermediate handlers, and the Department of Energy that is reasonably necessary to monitor the availability of disposal capacity, the use and assignment of allocations and the applicability of surcharges.

(2) The States of South Carolina, Washington, and Nevada may, after written notice followed by a period of at least 30 days, deny access to disposal capacity to any generator or intermediate handler who fails to provide information under paragraph (1).

(3) PROPRIETY INFORMATION.—

(A) Trade secrets, proprietary and other confidential information shall be made available to a State under this subsection upon request only if such State—

(i) consents in writing to restrict the dissemination of the information to those who are directly involved in monitoring under paragraph (1) and who have a need to know;

(ii) accept liability for wrongful disclosure; and

(iii) demonstrates that such information is essential to such monitoring.

(B) The United States shall not be liable for the wrongful disclosure by any individual or State of any information provided to such individual or State under this subsection.

(C) Whenever any individual or State has obtained possession of information under this subsection, the individual shall be subject to the same provisions of law with respect to the disclosure of such information as would apply to an officer or employee of the United States or of any department or agency thereof and the State shall be subject to the same provisions of law with respect to the disclosure of such information as would apply to the United States or any department or agency thereof. No State or State officer or employee who receives trade secrets, proprietary information, or other confidential information under this Act may be required to disclose such information under State law.

(h) EMERGENCY ACCESS.—

(1) If, pursuant to subsection 5(e), a State has been denied access to a regional disposal facility referred to in subsection 5(a), emergency access may be granted in accordance with this section.

(2) If the Governor of any State referred to in paragraph (1) determines that there exists a threat to public health and safety resulting from denial of access under subsection 5(e), such Governor shall notify the Nuclear Regulatory Commission and the Governor of the State in which a regional disposal facility is located of the need for emergency access to such facility.

(3) The Governor of the State in which such facility is located shall decide within 30 days whether to grant the emergency access requested under paragraph (1). Such access may be granted upon such terms and conditions, including a penalty surcharge, as the Governor of such State may require.

RESPONSIBILITIES OF THE DEPARTMENT OF ENERGY

SEC. 6. (a) FINANCIAL AND TECHNICAL ASSISTANCE.—The Secretary shall, to the extent provided in appropriations Acts, provide to those compact regions, host States, and nonmember States determined by the Secretary to require assistance for purposes of carrying out this Act—

(1) continuing technical assistance to assist them in fulfilling their responsibilities under this Act. Such technical assistance shall include, but not be limited to, technical guidelines for site selection, alternative technologies for low-level radioactive waste disposal, volume reduction options, management tech-

niques to reduce low-level waste generation, transportation practices for shipment of low-level wastes, health and safety considerations in the storage, shipment, and disposal of low-level radioactive wastes, and establishment of a computerized database to monitor the management of low-level radioactive wastes; and

(2) through the end of fiscal year 1993, financial assistance to assist them in fulfilling their responsibilities under this Act.

(b) REPORTS.—The Secretary shall prepare and submit to the Congress on an annual basis a report which (1) summarizes the progress of low-level waste disposal siting and licensing activities within each compact region, (2) reviews the available volume reduction technologies, their applications, effectiveness, and costs on a per unit volume basis, (3) reviews interim storage facility requirements, costs, and usage, (4) summarizes transportation requirements for such wastes on an inter-and intra-regional basis, (5) summarizes the data on the total amount of low-level waste shipped for disposal on yearly basis, the proportion of such wastes subjected to volume reduction, the average volume reduction attained, and the proportion of wastes stored on an interim basis, and (6) Projects the interim storage and final disposal volume requirements anticipated for the following year, on a regional basis.

MIXED WASTES

SEC. 7. (a) IN GENERAL.—The provision of this section shall apply to the disposal of any substance that is not considered byproduct material as defined by the Nuclear Regulatory Commission in its regulations and is—

(1) identified or listed as hazardous waste by the Environmental Protection Agency under the Solid Waste Disposal Act (42 U.S.C. 6921-6939a); and

(2) subject to regulation by the Nuclear Regulatory Commission under section 61 of title 10, Code of Federal Regulations.

(b) REGULATIONS.—Not later than 24 months after the date of the enactment of the Low-Level Radioactive Waste Policy Act Amendments of 1985, the Nuclear Regulatory Commission, in consultation with the Environmental Protection Agency, shall promulgate regulations pursuant to the Atomic Energy Act of 1954, as amended, governing the disposal of substances referred to in subsection (a) that the Commission determines should be disposed of at commercial low-level radioactive waste disposal facilities. Such regulations shall ensure a level of environmental protection at least equivalent to the level provided for such wastes under subtitle C of the Solid Waste Disposal Act (42 U.S.C. 6921-6969a).

(c) DELEGATION OF AUTHORITY.—

(1) Not later than 180 days after the Commission complies with subsection (b), the Administrator of the Environmental Protection Agency shall enter into a Memorandum of Understanding with the Nuclear Regulatory Commission under which the Administrator shall delegate the authority to issue permits and take appropriate enforcement actions under sections 3005 and 3008 of the Solid Waste Disposal Act (42 U.S.C. 6925) to the Nuclear Regulatory Commission with respect to the disposal of waste referred to in subsection (a).

(2) Any delegation of authority under paragraph (1) shall supersede any prior delegations of authority by the Administrator to the States to issue permits and take appropriate enforcement actions under such sections 3005 and 3008 that may be applicable to low-level radioactive waste disposal facilities licensed by the Commission or by an Agreement State.

(3) The Nuclear Regulatory Commission shall delegate to Agreement States the authority to issue permits and take appropriate enforcement actions under such sections 3005 and 3008 for low-level radioactive waste disposal facilities pursuant to the Memorandum referred to in paragraph (1).

XIII. Appendix

DEFINITION EXCERPT FROM TITLE 10, CFR 61.55

§ 61.55 Waste classification.

(a) Classification of waste for near surface disposal.

(1) *Considerations.*—Determination of the classification of radioactive waste involves two considerations. First, consideration must be given to the concentration of long-lived radionuclides (and their shorter-lived precursors) whose potential hazard will persist long after such precautions as institutional controls, improved waste from, and deeper disposal have ceased to be effective. These precautions delay the time when long-lived radionuclides could cause exposures. In addtion, the magnitude of the potential dose is limited by concentration and availability of the radionuclides at the time of exposure. Second, consideration must be given to the concentration of shorter-lived radionuclides for which requirements on institutional controls, waste form, and disposal methods are effective.

(2) *Classes of waste.*—(i) Class A waste is waste that is usually segregated from other waste classes at the disposal site. The physical form and characteristics of Class A waste must meet the minimum requirements set forth in § 61.56(a). If Class A waste also meets the stability requirements set forth in § 61.56(b), it is not necessary to segregate the waste for disposal.

(ii) Class B waste is waste that must meet more rigorous requirements on waste form to ensure stability after disposal. The physical form and characteristics of Class B waste must meet both the minimum and stability requirements set forth in § 61.56.

(iii) Class C waste is waste that not only must meet more rigorous requirements on waste form to ensure stability but also requires additional measures at the disposal facility to protect against inadvertent intrusion. The physical form and characteristics of Class C waste must meet both the minimum and stability requirements set forth in § 61.56.

(iv) Waste that is not generally acceptable for near-surface disposal is waste for which waste form and disposal methods must be different, and in general more stringent, than those specified for Class C waste. In the absence of specific requirements in this part, proposals for disposal of this waste may be submitted to the Commission for approval, pursuant to § 61.58 of this part.

(3) Classification determined by long-lived radionuclides. If radioactive waste contains only radionuclides listed in Table 1, classification shall be determined as follows:

(i) If the concentration does not exceed 0.1 times the value in Table 1, the waste is Class A.

(ii) If the concentration exceeds 0.1 times the value in Table 1 but does not exceed the value in Table 1, the waste is Class C.

(iii) If the concentration exceeds the value in Table 1, the waste is not generally acceptable for near-surface disposal.

(iv) For wastes containing mixtures of radionuclides listed in Table 1, the total concentration shall be determined by the sum of fractions rule described in paragraph (a)(7) of this section.

TABLE 1

Radionuclide	Concentration curies per cubic meter
C-14	8
C-14 in activated metal	80
Ni-59 in activated metal	220
Nb-94 in activated metal	0.2
Tc-99	3
I-129	0.08
Alpha emitting transuranic nuclides with half-life greater than five years	[1] 100
Pu-241	[1] 3,500
Cm-242	[1] 20,000

[1] Units are nanocuries per gram.

(4) Classification determined by short-lived radionuclides. If radioactive waste does not contain any of the radionuclides listed in Table 1, classification shall be determined based on the concentrations shown in Table 2. However, as specified in paragraph (a)(6) of this section, if radioactive waste does not contain any nuclides listed in either Table 1 or 2, it is Class A.

(i) If the concentration does not exceed the value in Column 1, the waste is Class A.

(ii) If the concentration exceeds the value in Column 1, but does not exceed the value in Column 2, the waste is Class B.

(iii) If the concentration exceeds the value in Column 2, but does not exceed the value in Column 3, the waste is Class C.

(iv) If the concentration exceeds the value in Column 3, the waste is not generally acceptable for near-surface disposal.

(v) For wastes containing mixtures of the nuclides listed in Table 2, the total concentration shall be determined by the sum of fractions rule described in paragraph (a)(7) of this section.

TABLE 2

Radionuclide	Concentration, curies per cubic meter		
	Column 1	Column 2	Column 3
Total of all nuclides with less than 5 year half life	700	([1])	([1])
H-3	40	([1])	([1])
Co-60	700	([1])	([1])
Ni-63	3.5	70	700
Ni-63 in activated metal	35	700	7000
Sr-90	0.04	150	7000
Cs-137	1	44	4600

[1] There are no limits established for these radionuclides in Class B or C wastes. Practical considerations such as the effects of external radiation and internal heat generation on transportation, handling, and disposal will limit the concentrations for these wastes. These wastes shall be Class B unless the concentrations of other nuclides in Table 2 determine the waste to the Class C independent of these nuclides.

(5) Classification determined by both long- and short-lived radionuclides. If radioactive waste contains a mixture of radionuclides,

some of which are listed in Table 1, and some of which are listed in Table 2, classification shall be determined as follows:

(i) If the concentration of a nuclide listed in Table 1 does not exceed 0.1 times the value listed in Table 1, the class shall shall be that determined by the concentration of nuclides listed in Table 2.

(ii) If the concentration of a nuclide listed in Table 1 exceeds 0.1 times the value listed in Table 1 but does not exceed the value in Table 1, the waste shall be Class C, provided the concentration of nuclides listed in Table 2 does not exceed the value shown in Column 3 of Table 2.

(6) Classification of wastes with radionuclides other than those listed in Tables 1 and 2. If radioactive waste does not contain any nuclides listed in either Table 1 or 2, it is Class A.

(7) The sum of the fraction rule for mixtures of radionuclides. For determining classification for waste that contains a mixture of radionuclides, it is necessary to determine the sum of fractions by dividing each nuclide's concentration by the appropriate limit and adding the resulting values. The appropriate limits must all be taken from the same column of the same table. The sum of the fractions for the column must be less than 1.0 if the waste class is to be determined by that column. Example: A waste contains Sr-90 in a concentration of 50 Ci/m^3 and Cs-137 in a concentration of 22 Ci/m^3. Since the concentrations both exceed the values in Column 1, Table 2, they must be compared to Column 2 values. For Sr-90 fraction $50/150=0.33$; for Cs-137 fraction, $22/44=0.5$; the sum of the fractions$=0.83$. Since the sum is less than 1.0, the waste in Class B.

(8) *Determination of concentrations in wastes.*—The concentration of a radionuclide may be determined by indirect methods such as use of scaling factors which relate the inferred concentration of one radionuclide to another that is measured, or radionuclide material accountability, if there is reasonable assurance that the indirect methods can be correlated with actual measurements. The concentration of a radionuclide may be averaged over the volume of the waste, or weight of the waste if the units are expressed as nanocuries per gram.

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